

## **DOCTORAL THESIS**

### **Predictors of substance use in Brazilian immigrants in the UK: The role of acculturation**

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*Award date:*  
2015

*Awarding institution:*  
University of Roehampton

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**Predictors of substance use in Brazilian immigrants in the  
UK:  
The role of acculturation**

By

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A thesis submitted in partial fulfilment of the requirements for the degree of PhD

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**2015**

## **ABSTRACT**

In general, scholars agree that there are several contextual factors influencing immigrants in the UK to use alcohol and other drugs. Not much is known however about how and to what extent acculturative changes are influencing substance use in immigrants and members of minority ethnic groups. This study aims to develop a better understanding of the predictors of substance use by exploring the impact that acculturative changes have in patterns of substance use amongst Brazilian immigrants in the UK.

A combination of quantitative and qualitative methods was adopted in a cross-national research sample compromised of Brazilian participants residing in the UK ( $n=164$ ) and Brazilian participants residing in Brazil ( $n=161$ ). Initially, quantitative analysis was carried out to explore country differences in types, frequency, and predictors of substance use. The quantitative analysis was followed by qualitative data collection to explore in-depth complex issues related to social and cultural factors that underlie the susceptibility of Brazilian immigrants to use alcohol and other drugs. Thematic Analysis was adopted to analyse the qualitative data.

It was observed that Brazilians who had immigrated to the UK showed an overall increase in the frequency with which they used substances, however, significant differences were only found in recreational drug use, poly-substance use, and binge drinking. Such shifts were influenced by attitudes, values, and behavioural changes, and were strongly predicted by the stress caused by threat to cultural identity. Both drinking for social motives and gender differences predicted involvement in substance use in Brazilians in the UK and in Brazil, whereas resilience, impulsivity,

positive and negative affect, and reasons for drinking motivated by conformity and coping were found to have no effect on patterns of substance use in either of the samples. Overall, it seems that, whilst Brazilians in the UK are motivated by negative reinforcement processes to use substances (e.g. coping), in Brazil participants are motivated by positive reinforcement processes (e.g. enhancement). High contact with both British and Brazilian cultures will only predict substance use when threat to cultural identity moderates this relationship. Brazilian immigrants new to the UK are at greater risk for substance use independent of any acculturative strategies or stresses. Length of residence in the UK does not predict the adoption of integration strategies and the stresses caused by acculturation can be experienced throughout the life course of the Brazilian immigrants in the UK.



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## DEDICATION

*To my nephew, João Pedro, a strong little soldier that showed me the meaning of perseverance.*

## **ACKNOWLEDGEMENTS**

I would like to express my sincere appreciation to my supervisor, Dr Catherine Gilvarry, for her encouragement and continuous support throughout this enjoyable project. I would also like to thank my second supervisor, Professor Marcia Worrell, for all her advice and time on this journey. I am particularly grateful to the Department of Psychology at the University of Roehampton and the Santander Universities Scheme for offering me funding support to complete this project. Gratitude also extends to Professor Silvia Helena Koller from the Federal University of Rio Grande do Sul and Professor Ronaldo Laranjeira from the Federal University of São Paulo. The opportunity to visit your research centres was key to this project.

Numerous friends both from academic and non-academic worlds offered me interesting ideas and thoughts on my research, as well as supporting me by ensuring that I would engage in non-PhD-related activities. I am especially grateful for all my wonderful colleagues from the PhD office for the great fun and supportive times that we had together.

To my family, thank you for providing ongoing encouragement along the way. In particular, thanks to my mum, Marli, for supporting my decisions and to be always there for me. Finally, the most important person during this whole process has been my husband John. I could not wish for a more supportive partner in life. He gave me inspiration, motivation, and strengths in so many ways. John, I would not have been able to do this without your never-ending love and support. I love you dearly!

## **CHAPTER 1 INTRODUCTION**

### **1.1 CONTEXT OF THE THESIS**

The study presented in this thesis is the first research-based work conducted to explore patterns of substance use amongst Brazilian immigrants in the UK. The key motivation that underpins the reasons for conducting this research is based on information provided by two major associations responsible for giving assistance to Brazilians in the UK (Association of Brazilians in the UK and Casa do Brazil) that suggest the number of young adult Brazilians in the UK seeking help for dealing with alcohol and other drug problems is growing.

The problematic use of substances amongst Brazilian immigrants is in line with several studies indicating that substance use, and misuse patterns, amongst some minority ethnic groups in the UK is high (i.e. Bayley, 2010; Beddoes et al., 2010; Fountain, 2009; Hurcombe et al., 2010). In general, scholars tend to agree that there are several contextual factors influencing immigrants and members of minority ethnic groups' decisions about using alcohol and other drugs including, for example, discrimination in the labour market, housing deprivation, and economic constraints. Not much is known, however, about (1) the extent to which cultural changes that occur as a part of the process of adaptation to life in the UK is putting immigrants at risk of substance use problems, and (2) the stress caused by negotiating more than one set of values, norms and identities and its impact on individuals' patterns of substance use. Consequently, it is not clear whether the increase in substance use is influenced by the migratory processes to the UK or by a set of psychosocial factors

associated with the immigrants' culture of origin. Thus, given that very little research has actually explored such dynamics, this study will attempt to address this gap, by developing a better understanding of the factors that contribute to changing patterns of substance use in Brazilian immigrants.

Pursuant to this aim, the current research will involve an in-depth investigation of the effects that acculturative changes have on substance use behaviours. The interest in exploring changes in Brazilian immigrants under the acculturative process to the UK is strongly connected with the goal of this thesis, for example, to contribute to further understanding the trajectories that shape the social, cultural and behavioural components of the migratory experience. By understanding such trajectories, this research has the potential to throw light on the wide range of components that impact patterns of substance use in Brazilian immigrants, and consequently, may significantly contribute to understanding the causes of substance use and misuse in immigrants and members of minority ethnic groups in British society.

Acculturation is defined by Redfield, Linton, and Herskovits as "*those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both group*" (Redfield et al., 1936, p. 149). In more general terms, research suggests that as immigrants become more acculturated, they adopt the attitudes, social norms, and behaviours of the social reference group of the host country. Given that cultural changes will take place for the new comers and the existing members of the hosting society, the concept of acculturation has been broadly applied to both groups.

According to theory and empirical research, acculturation has been commonly formulated using a unidimensional or bidimensional model according to the attitudes

and strategies that immigrants might employ to deal with their situation in the new culture. The unidimensional model (Cuéllar, Harris, & Jaso, 1980; Gordon, 1995) refers to acculturation as the individuals' cultural orientation toward their culture of origin or the host culture on a continuum of lifestyle preferences (e.g. language use, food, entertainment, media, etc.). Acculturation is described in this model in terms of two cultural orientations: one's relationship with their culture of origin and their relationship with the host culture. Yet, the bidimensional model views acculturation as the individuals' desire to maintain their original culture and, at the same time, to have relationships and contact with members of the host society. As the orientation from one or other cultures are conceptually independent in the bidimensional model, other types of acculturation outcomes rather than acculturated or non-acculturated will result. Although both models are multi-dimensional in the sense of accounting for a range of factors and stages of the acculturation process (i.e. linguistic, social, economic, legislative, family, etc.), there are differences in the directions of possible outcomes. Thus, whilst unidimensional models involve the acceptance or rejection of one culture or the other, bidimensional models operationalise acculturation as a combination of culture maintenance and contact. The latter model has been at the centre of Berry et al.'s work, who classifies four possible emerging acculturation strategies focusing on the extent to which the individuals retain their culture of origin and the extent to which they adopt aspects of the host culture (Berry, 1976; 1990; 1997; Berry, Phinney, Sam & Vedder, 2006; Sommerland & Berry, 1970). The four types of identification proposed by Berry et al. are: *Integration* (high on both culture maintenance and contact), *Assimilation* (low on culture maintenance, high on contact), *Separation* (high on culture maintenance, low on contact) and *Marginalisation* (low on both). The processes of adopting a particular strategy are

viewed by Berry (1976) as an orthogonal process that can also have differing consequences for emotional and physical health, as well as socio-cultural outcomes (e.g. LaFromboise et al, 1998; Uger et al., 2000; Ward, 1996; Zagfeka & Brown, 2011).

With regard to these consequences, Berry's acculturation framework suggests that outcomes arising from a particular acculturation strategy will depend in part on the prevailing societal climate within which this acculturation is taking place.

Nevertheless, in places where newcomers and the host society are in concordance over acculturation preferences, the outcomes are predicted to be more positive than those where there is discordance between them (Sam & Berry, 2010).

In the UK, there are a limited number of studies that have explored acculturation and substance use together and what is available today tend to be mostly informed by US based research, which suggests that, a) after a period living in the new culture the immigrant substance use behaviour will follow the trends of substance use of the host group due to the adoption of the new values and norms, and b) the stress caused by the acculturative process might lead immigrants to use substances as a way of coping with such stress. Although, such approaches have contributed to highlight the association between acculturation and substance use, the actual mechanisms of how acculturation leads to changes in patterns of substance use have remained unclear and largely unexplored in the literature. As a result, the majority of studies conducted to date have viewed the acculturation construct as merely an explanatory variable for observations instead of making greater attempts to measure or to fully understand it.

The implications of such use of the concept of acculturation in this explanatory context is particularly worrisome. As Hunt (2004) describes, the term may be *"nothing more than ethnic stereotypes wrapped in the cloak of scientific jargon woven*

*out of sophisticated psychometric formulas”* (p. 982). This overly simplistic use of the term not only reinforces unhelpful ethnic stereotyping that has implications for ethnic minority experiences of discrimination in particular, but the concept also becomes used as something of an epidemiological black box (Abraido-Lanza et al., 2006). The current study challenges these simplistic and unidimensional shortcomings by examining the particular cultural and social elements involved in substance use behaviours in Brazilian immigrants in the UK, within their actual cross-cultural and migratory context.

## **1.2 RESEARCH AIM AND OBJECTIVES**

The overarching aim of this research was to investigate the extent to which changes occurring as a part of the acculturation process to the UK culture are placing Brazilian immigrants at great risk of substance use problems. This aim was addressed through the examination of five major research objectives by using a combination of quantitative and qualitative methods in a cross-national sample comprised of Brazilian participants residing in the UK and Brazilian participants residing in Brazil.

### **1.2.1 Research Objectives**

- i) Examine potential differences and similarities in patterns of alcohol and substance use amongst Brazilian immigrants in the UK and their counterparts in Brazil.*

To be able to understand whether the migratory process to the UK has an influence on the problem drinking and drug-taking culture in Brazilian immigrants, it is

important to understand the actual patterns of substance use in the immigrants' country of origin.

It is expected that by exploring patterns of substance use in the UK and in Brazil, that participants will present some differences and similarities regarding patterns of substance use according to their country of residence. It is hypothesised that Brazilians in the UK will use more of a variety of substances and in higher frequencies than their counterparts in Brazil.

*ii) Explore whether some established predictor factors for substance use in the British population can also be used to predict substance use in the Brazilian immigrant population in the UK.*

During recent decades, research has helped to establish a better understanding of factors involved in the aetiology and antecedents of substance misuse. Factors such as family influences, peer influences, personality characteristics and drinking motives have been identified in relation to alcohol and substance use. However, there is insufficient evidence focussing on the profiles of minority ethnic groups (Frischer et al., 2007). With the present lack of knowledge on the predictors of substance use in people from minority ethnic groups in the UK, much existing work has followed the assumption that constructs valid for the majority, hold equal validity for members of minority ethnic groups.

In the present research, an established set of predictor factors for substance use problems will be explored to determine whether these predictors can also be used to explain substance use in members of the Brazilian community in the UK. It is hypothesised, for example, that particular personality characteristics are associated with specific drinking motives, which in turn are related to more problematic alcohol



and drug use. Specifically, it is predicted that negative affect, anxiety sensitivity and hopelessness, and lower levels of resilience are associated with drinking for coping motives, which are closely related to higher risk of substance and alcohol misuse. This relationship, however, may vary across participants due to gender and age differences. It is also hypothesised that some of the predictors established for participants in Brazil will also apply to Brazilian participants in the UK. However, it is predicted that the relationships may vary in terms of importance and, in the case of Brazilian immigrants, this relationship may be influenced by acculturative outcomes. Thus, as part of determining the factors that predict substance use amongst Brazilian immigrants in the UK, the opportunity for exploring these factors in both countries of residence will enable the tracking of possible predictor factors related to the immigrant country of origin (Brazil) and those developed through the migratory experiences in the UK.

*iii) Establish the magnitude with which psychological predictor factors are related to acculturative outcomes*

Whereas the previous objective is concerned with exploring individual predictor factors associated with substance use, here the interest is focused on the interplay between these predictor factors and acculturative outcomes such as acculturative strategies and stresses. For example, it has been well established in the literature that acculturative outcomes such as the four strategies suggested by Berry et al. (1975) (integration, assimilation, separation, and marginalisation) have a strong relationship with individuals' well-being and health behaviours. Integration, for example, has been reported to be related to the most positive effects on health behaviours, whereas marginalisation with the most negative effects (DuBard & Gizlice, 2008;

Eamharanond et al., 2009; Mainous et al., 2006). Studies on acculturation and substance use, however, provided findings that support the supposition that both integration and marginalisation acculturative strategies might be related to emerging patterns of substance use in minority ethnic groups (De la Rosa, 2002; Dotinga et al., 2006).

By exploring the relationship between psychological predictor factors (i.e. personality traits, positive and negative affect, resilience, and drinking motives) and acculturative outcomes (acculturative strategies and stresses caused by this process) it is expected that a further understanding will be developed of how individual factors when interplayed with acculturative experiences might increase the likelihood of Brazilian immigrants to develop substance use problems.

It is predicted in this way that the integration strategy will be associated with the most positive psychological outcomes and stresses caused by the acculturation process to the most negative psychological outcomes.

*iv) Investigate how the stress caused by negotiating more than one set of values, norms and identities impacts on individuals' patterns of substance use.*

Much has been written in the last two decades about the use of substances among some members of minority ethnic groups in the UK as a form of coping mechanism to deal with the stresses imposed by social and economic strains associated with their minority ethnic status (Fountain et al., 2009). Not much is known, however, about the influence that interpersonal conflicts and strain arising from maintaining or losing the original culture has on alcohol and drug use.

Immigrants in Britain, as well as the overall British population, are today exposed to a

range of different cultural representations due to the pluralistic aspects of British society. Furthermore, immigrants are more mobile than ever before and, in the face of the technologies available and more affordable ways of travelling, connection with the country of origin can be maintained much more easily than in the past. Such characteristics are markedly attributes of contemporary international immigration and there are a limited number of studies exploring the relation between possible stresses experienced by those who are connected two more than one culture and substance use behaviours.

It is hypothesised in the current study that the stress caused from negotiating more than one set of values, norms, and identities might be leading some members of the Brazilian community in the UK to use and misuse alcohol and other drugs. The impact of this stress will be examined by exploring the likelihood that threat to cultural identity leads to alcohol and substance use.

- v) *Examine the process of acculturation experiences by Brazilian immigrants in the UK and the impact on their attitudes, behaviours, and values regarding alcohol and substance use.*

The interest in identifying the impact of the acculturative process on influencing cultural attitudes, behaviours, and values has important implications for understanding how transformations experienced by immigrants might affect patterns of substance use. As well as analysing the extent to which these transformations occur while exposed to British culture, the current study will also ascertain whether attitudes, behaviours, and values regarding alcohol and substance use approximate, or are resistant to the influences of the majority of British population.

It is hypothesised that attitudes, behaviours, and values regarding alcohol and substance use are likely to differ between Brazilians in the UK and Brazilians in Brazil as a direct consequence of the migratory process to Britain. These three domains will approximate those of the British population, but the extent of these shifts is likely to vary according to levels of contact with the host culture. The extent of these changes will be defined by an in-depth qualitative investigation of participants' description of their thoughts about alcohol and substance use and by exploring differences between Brazilian participants in the UK and in Brazil.

### 1.3 DEFINITIONS

The term *substance use* in this thesis refers to the broad use of all groups of drugs (e.g. sedatives, stimulants, opiates) that are classified either as legal drugs (e.g. alcohol, cigarettes, legal highs) or as illegal drugs (e.g. cannabis, cocaine, MDMA). In addition, the term *substance use* was adopted instead of *substance misuse* due to the focus of this research which is exploring changes in patterns of substance use rather than value-judge the participants taking of drugs.

The other two terms worthy of clarification in this thesis are *immigrant* and *member of minority ethnic groups* as very often these concepts are confounded in the literature. This is due to the fact that many minority ethnic groups are defined through their 'origins' in a different country (Burton, Nandi, & Platt, 2008). To avoid ambiguities, the term *immigrant* in this thesis refers exclusively to those people who moved to the UK from overseas, whilst the term *members of minority ethnic groups* refers to the cultural membership of ethnic groups that occur through a range of cultural ties including, for example, cultural heritage (e.g. first, second and third

generation of migration), language, race, and behavioural and religious practices.

#### **1.4 STRUCTURE OF THE THESIS**

Chapter two provides a detailed background of the present multiethnic context of British society. This review identifies the importance of the migratory context in which the Brazilian community in the UK is founded, and how the Brazilian context is in-line with contemporary social formation of other new ethnic minority groups in the UK. This background also evaluates the evidence to substance use in minority ethnic groups and the role played by the acculturative process on changing patterns of substance use in migrant populations.

Chapter three presents detailed information of the methodological approach of the current study.

Chapter four describes a range of statistical tests conducted to ensure that no violations would hinder the interpretability of the successive quantitative analysis carried out in Chapter five. In addition, due to the cross-national nature of the current study, Chapter four also assesses the psychometric properties of the scales that were translated into the Brazilian Portuguese language and adapted for the purpose of this study.

Chapter five focuses on the analysis of the quantitative data from 164 Brazilian participants from the UK and 161 participants from Brazil and compares statistical results across both samples.

Chapter six reports the qualitative analysis of a set of interviews (N=19) and a focus group session (N=4).

The final chapter (Chapter seven) brings together the combined results from the quantitative and qualitative analysis and discusses their relevance in relation to acculturation and substance use theory and practice. It closes with an evaluation of the strengths and limitations of this thesis with proposals for future work.

## **CHAPTER 2 RESEARCH BACKGROUND**

This thesis aims to build upon the documented acculturation literature described in the introductory chapter, to examine the extent to which patterns of substance use amongst Brazilian immigrants change under the influence of the migratory process to the UK.

The present Chapter is structured into two main parts. The first part of the Chapter begins by describing the UK context surrounding the immigration. The aim is to appreciate who the new migratory groups in the UK are, how they are formed, and what the implications of this process might be for their experiences within the UK. This will involve a historical, political, and social overview describing what the actual pluralistic British society consists of. Following this will be an exploration of the Brazilian migratory diaspora in the UK. The focus here is to present detailed information about the profile of the Brazilian community in the UK and to bring to light the contextual relevance of this community to the actual migratory scenario in Britain, and so, the significance of exploring patterns of substance use in this community. In the second part of this Chapter attention will turn to studies about substance use in minority ethnic groups in the UK. There then follows an exploration of the current understanding of the process of acculturation and substance use behaviours. Acculturation will be discussed specifically in terms of patterns of substance use, and will consider the extent to which behaviours may change given the experience of being exposed to different cultures. Following this a critical discussion will be presented of difficulties associated with acculturation measurement in the field of substance use and directions for improvement. This Chapter will conclude with the exploration of patterns of substance use in Brazil and with a summary of the

key points addressed in this literature review.

## **2.1 MASS IMMIGRATION TO BRITAIN**

Britain has always been a site for international migration. It was however, during the beginning of the industrial era that the homogeneity of British society - largely White British - began to change. During this time Britain received the first large scale labour immigration from Ireland, which was the main labour immigration source to Britain for nearly fifty years (Castle & Kosack, 1985). Nonetheless it was after the end of World War II that mass immigration numbers made a significant leap and dramatically changed the ethnic homogeneity of British society, with the large-scale arrival of African-Caribbean and South Asian peoples to provide manual labour for industry, construction, and transport (Kay & Miles, 1992). As a result of the large influx of immigrants coming to Britain to fill the gaps in the labour market during the two decades after the World War II, laws restricting who was allowed to enter and settle in the country were implemented for the first time in British history (Hansen & Weil, 2001).

The overwhelmingly economic motivation for immigration predominant at that time became less clear-cut over the course of the post-cold war period due to a significant change in the diversification of migratory types. From the 1990s onward, Britain experienced a remarkable increase in net immigration - with roughly 150,000 per year since 1998 – as people from many countries joined the movement as a way of fleeing wars, persecution, natural disaster or seeking economic and cultural enrichment in the UK. Since 1990, the main entrance of immigrants to Britain has been through asylum seeking, illegal migration, students, and skilled work migration



(Castles & Miller, 2003), with a large number originating from places which have no specific historical – particularly, colonial - relation to Britain.

Immigration in Britain today is a polemic topic as the economic and social consequences attract attention at a national level from public, governmental, and private spheres. The main question of how many and who should be allowed into the country presents both a moral and economic dilemma. One of the most prevalent themes in this scenario regards the impact of immigration on population growth. Recent figures show that overall net migration – the difference between immigration and emigration – increased from 100,000 in the late 1990s to around 216,000 (+/- 35,000) in 2011 (ONS, 2012). Net migration of non-EU nationals constituted an estimated 95% of total net migration to the UK in 2011 (205,000) and in the year 2012 alone, the prevalence estimate was that 498,000 new immigrants entered the UK. According to the latest figures from the Office of National Statistics' (ONS, 2012) population projection to 2035 (25 year projection with a base year of 2010) net migration at current level (+/- 200,000) will contribute to the increase of the UK population by 11million, an increase of 18% (from 62.3 million to 73.2 million). It is estimated that nearly half of this increase (47%) will be directly linked to net migration, although 21% of this increase will be a consequence of the additional contribution of new migrants to natural change (i.e. births and deaths) (The Migration Observatory, 2012).

To tackle the current immigration level, the British government aims to reduce net migration to 'ten of thousands' by the end of the year 2015 (the Conservative Party proposal of bringing net migration to below 100,000) (Conservative Party, 2010). However, the reality found in Britain today is that even if net migration gets reduced

to such figures, it will not change the fact that Britain is a multi-ethnic country in which cultural diversity is embedded across all domains of the society.

### **2.1.1 Multi-Ethnic Britain**

According to the Office for National Statistics' (ONS, 2012) latest estimate, 14 per cent of the population of England and Wales self-identify as belonging to an ethnic group other than the majority 'White British'. Figures from the ONS also indicate that minority ethnic groups are highly concentrated geographically within the UK, with the main areas of concentration being Greater London, the West Midlands, Greater Manchester, West Yorkshire and the Leicester/Nottingham corridor in the East Midlands. In Greater London minority ethnic groups make up 55% of the total population (ONS, 2011).

In the last Census for England and Wales, Asian/Asian British accounted for the largest minority ethnic group in the UK (7.5%) followed by Black African/Caribbean/Black British (3.3%) (ONS, 2012). Compared with the previous Census (Census 2001) the only ethnic group that did not increase during the ten years Census period was Black Caribbean. On the other hand, the 'Other White' group (i.e. Polish, Romanian, Latinos) has shown a significant increase over this period. The right to free movement and employment within the UK which was granted to the eight Eastern European countries – the so-called A8 countries – by joining the EU in 2004 is strongly associated with the growth of this particular group.

Changes in the demographic features of UK ethnic groups have significant implications for the development of policies that have the overall goal of promoting tolerance and respect of group identities. Such changes are particularly resistant to

the implementation of multiculturalist policies as it has been shown that the size and diversity of current immigration patterns are not fully addressed when developing such policies (Vertovec, 2010).

The main criticism of multi-culturalism in this scenario regards the difficulty of embracing the vast number of variables that interplay in the current migratory context. In particular, such difficulties act as barriers when creating and implementing a range of multi-cultural policies, structures, and programmes that have the objective of facilitating social acceptance and accommodating culture-based differences of value, language, and social practice. For example, despite changes in the types of migratory process and plurality of countries of origin most public policies towards multi-culturalism have been focused mainly on African-Caribbean and South Asian communities of British citizens (Somerville, 2009; Vertovec, 2007, 2010).

Although the growth of respect and tolerance still seems limited for members of these two ethnic groups, the current features of the new-comers in the UK are considerably different from the two mentioned. The social formations of the new group of immigrants and consequently the new minority ethnic groups are various as new immigrants come in both small and large groups, they tend to be more transient, more socially stratified, have less organised communities, more connected with their home country, and have a greater variety of legal statuses (i.e. visas, marriage status). Because public policies are still largely based on models of previous immigration flows, such social formations have yet to be placed on the public agenda.

Characteristics such as the ones referred to, coupled with evidence of deep and enduring patterns of inequality among ethnic minorities present a whole debate about the future of multiculturalism. The criticisms surrounding multi-culturalism

entail a range of problems that support the hesitancy of immigrants to integrate with the mainstream society. A full discussion about the outcomes that emerge from the concept or set of policies arising from multi-culturalism is beyond the scope of the current research. It is however, as mentioned above, critical that any debate around multi-ethnic societies recognizes the new type of diversity that now exists in Britain.

### **2.1.2 Super-Diverse Britain**

The concept of diversity in Britain today includes a range of new factors that are not merely restricted to ethnic identification. As discussed above, immigrants are now coming from several countries in the world, in higher numbers, and in different forms (i.e. refugees, labour immigration, students, etc). Such heterogenic characteristics have a marked effect in the social formations of the new groups of immigrants. The ethnic communities of the second and third generations of immigrants that came and settled in the UK after the end of World War II, in particular the African Caribbean and Asian immigrants in the 1970s, are also heterogenic in nature (i.e. different religions, family structures, etc). Mixed ethnic identities on the other hand, reflect a fast growing population in the UK, where mixed ethnicity couples are estimated to make up 9% of marriages or cohabiting partnerships (ONS, 2011).

To address the complexity of this new type of diversity, Vertovec (2007) suggested the notion of “super-diversity”. Overall, super-diversity refers to a range of additional variables that interplay in the present context of migration and ethnic communities. Such additional variables may include differential immigration statuses and their associated entitlements and restrictions of rights, divergent labour market experiences, distinct gender and age profiles, and types of settlements. The main

point that underscores this notion is that any discussion and strategy creation that fosters community cohesion, and a range of public services that are appropriate for all, should gather basic information on how such variables interplay in the context of the new diversity rather than follow simple ethnicity-focused approaches.

Within the context of the growing complexity of the new diverse population in the UK, an investigation of the new immigrant groups (those new groups that joined the influx movement to the UK since the 1900s) carries with it a range of significant public service implications. This is particularly important for gathering an understanding of the dynamics involved in the super-diversity context suggested by Vertovec (2007). Such understanding offers opportunities for policy makers to deliver strategies that support the implementation of services that utilise a set of generic skills that are transferable and applicable for all populations, despite ethnic group membership.

There are today various new groups making up the so-called “new immigrants”. Among one of the fastest growing groups and, at the same time one of the least visible immigrant groups, are the ones coming from Latin American countries (in particular Colombia, Brazil, Peru, Ecuador, Bolivia). The estimated figure is that in London alone there are approximately one million Latin American immigrants (McIlwaine et al., 2011). Despite this considerable size and their rich presence, which is demonstrated by the rise of salsa classes, clubs, restaurants, and carnivals, very little is known about them. Notwithstanding, the last few years has seen an increasing interest among scholars on issues relating to the Latin American community in the UK, and particularly in London, where a large part of it is concentrated. Research by Carlisle (2006), McIlwaine (2009, 2010, 2011), McIlwaine et al. (2011), Moser & McIlwaine

(2004) reflect this growing academic attention. Even with this increasing attention by scholars, the Latin American diaspora still remains significantly out of the focus in the overall public agenda. According to Carlisle (2006) the dearth of attention on the UK Latin American community is particularly evident when compared with Africans, South Asians, or Eastern Europeans, Latin American migrants as a whole remain a fairly small population in Britain. The invisibility of Latin American immigrants in the population surveys might, as stressed by Carlisle (2006), be associated with the non-categorisation of Latinos as an ethnic group in these surveys. As a result, Latin American descendants in the UK generally report belonging to 'Other' or 'Other White' ethnic groups. Due to the high number of undocumented Latin American migrants (without a right to stay visa) there are convincing reasons to not want to be visible by the local authorities.

Within the Latin American community in the UK, Brazilians comprise the largest group (McIlwaine et al., 2011). According to the ONS (2012) there are today 80,000 Brazilians living in Britain, however, based on passport renewals and Home Office applications, the British and Brazilian authorities estimate that there are in fact 260,000 Brazilians now living in the UK (Ministério das Relações Exteriores, 2009). Like other members of the Latin American community, Brazilian immigrants have begun to play an important role in the multicultural landscape of Britain. Brazilian bars, restaurants, and shops are more easily spotted than ever before, and Brazilian immigrants are frequently seen with occupations such as cleaners, chefs, and delivery services. Nonetheless, a large number of skilled Brazilian workers are coming to the UK to join the international labour market or to pursue further qualifications. Due to such diverse characteristics within this group, it seems that an investigation of a community with such considerable size like the Brazilians in the UK is very likely to

offer a great opportunity to understand the dynamics involved in the new type of immigration to Britain and the association of this process to how the new comers are adapting to the UK. It seems plausible to say in this context that any service seeking to adopt a framework aimed at addressing all the issues, that ever increasing diversity creates, can be appropriately designed and broadly delivered for the wider society by using information gathered from a heterogenic community such as the Brazilian community in the UK.

## **2.2 BRAZILIAN IMMIGRANTS IN THE UK**

Although there is no reliable data on the number of Brazilians residing in Britain, there are numerous sources pointing to the conclusion that Brazilians in the UK are an expanding group. Figures from the ONS (2010) for example revealed that the number of Brazilian-born residents in the UK increased by almost 700% between 1991 and 2009. This remarkable increase suggests that the Brazilian community has a similar growth ratio as other new immigrant groups, like the Polish community.

The recent large inflow of Brazilian immigrants to the UK has been attracting the interest of scholars in the field of immigration. Despite this, the number of studies exploring this migratory movement and the dynamics of this community in Britain is still relatively small. In this section, an overview of the Brazilian community will be based on information gathered by the few studies carried out to date within this community.

### **2.2.1 Who are the Brazilian Immigrants in the UK?**

An accurate demographic profile of any migratory group in the UK is very difficult to obtain. In the case of Brazilian immigrants there is a massive inconsistency between the different figures given for the size of the Brazilian community in Britain.

According to the UK Home Office (2012) nearly 60,000 Brazilians are now residing in the UK. This number, however, does not correspond to the real size of the Brazilian community in the UK. According to the Brazilian Government the estimated number of Brazilian people living in the UK is between 150,000 and 250,000 (Ministerio das Relacoes Exteriores, 2009). Since the late 1990s, the most popular destination for Brazilians in the UK has been London (Cwerver, 2001). The latest estimate is that a number of between 130,000 to 160,000 Brazilians live in Greater London (Evans, et al. 2007).

The 250,000 figure was obtained through services provided by a series of official and unofficial sources by the Brazilian Embassy and General Consulate. The reasons for the inconsistent figures between both official and unofficial sources about the size of the Brazilian community in the UK are many. One possible reason for this is the failure of British authorities to monitor the movement of people in the territory after they pass through the borders both on entry and exit, except in deportation cases.

Another possible reason might be the fact that, as a standard procedure, authorities in the migration border controls are required to put restrictions regarding the time that an overseas' person can remain in the country. In the case of new-comers from Brazil, many stay even after their visa has expired. As a result of both un-monitored and un-registered entries and exits, it is nearly impossible to know exactly how many Brazilians reside in the UK. Moreover, for those Brazilians who stay with expired



visas there are reasons why they might not want to be visible to local authorities and participate in national surveys such as the census. In this way, it is very likely that the official authorities underestimate the number of Brazilian residing in the UK.

One possible way to explore the changes and size of the Brazilian community is through the availability of free advertising in publications by Brazilian magazines that circulate in the community. Fifteen years ago for example, there was only one Brazilian magazine published, today there are more than ten magazines circulating regularly in the Brazilian community. The high demand for publishing advertisements is a result of the growth of services and products available in the UK, which are directed primarily at Brazilian clients. The variety of services advertised in the Brazilian magazines is impressive and includes beauty treatments, housekeeping services, office cleaning, deliveries, party decorations and animations, legal services, real estate, remittances of money to locations abroad, translation, dental and psychological treatments. There are also a large number of shops selling a wide number of Brazilian products, including clothes, drinks, foods, plus coffee shops, bars and restaurants.

These advertising publications are also used by churches and religious centres (Catholic, Protestant, Pentecostal, Spiritist Centres). There is information about associations that focus on providing help and assistance for Brazilians in the UK such as Casa do Brasil em Londres and ABRAS (Association of Brazilians in the UK). There is also information about many Brazilian parties that take part in the city weekly. Moreover, the number of online pages on the internet and communities in the social media is constantly increasing. Similar to printed magazines, these online sources also advertise a series of services, as well as providing opportunities for Brazilians to

name and discuss a range of topics associated with life in the UK. According to reports from the Brazilian Consulate in London, around 350 Brazilians approach the institution each day seeking consular services (the majority of cases are illegal immigrants who entered the UK with a student visa and have then over-stayed in Britain) (IOM, 2007). It seems therefore, that the Brazilian diaspora in London is of considerable size.

As there is no official document regarding the size of the Brazilian community in the UK, a demographic profile of the community in the UK is difficult to establish. Evans et al. (2011) however, carried out a demographic study of the Brazilian community in London with a total of 550 surveyed. Results from this study revealed that in London there is quite a mix of Brazilians with regard to gender (52% male and 48% female). The survey also showed that the Brazilian community in London is generally young with a mean age of 35 years old. Approximately 82% of the respondents were below 40 years old. In relation to housing, a significant number of Brazilians in London share a house with a family member (42%). In addition, around one third (36%) share a bedroom with a mean of three people and 82% of the sample do not have children.

Regarding level of education, a large number of the sample in Evans et al.'s study claimed to have enrolled in a Higher Education course (73%), however nearly half of the group had not concluded the degree programme following their decision to leave Brazil. Around one quarter (23.6%) of the respondents completed Secondary School. By taking into consideration the level of education obtained in Brazil as an indicator of social class (Margolis, 1998; Cwerner, 2001; Jornadan & Duvell, 2002), the results indicate that the Brazilians that took part in this survey in London were

predominantly from middle and lower social classes in Brazil.

### **2.2.2 Reasons for Immigrating to the UK**

Similar to other migratory groups, the reasons for Brazilians moving to Britain follows political and historical particularities at the time. The first official evidence of Brazilians in the UK was reported by the census data of 1971 (Kubal et al., 2011). At that time approximately between 2,000 and 4,000 Brazilians were living in the UK and they mainly comprised of political asylum seekers who fled Brazil during the authoritarian regime of the military dictatorship (1964–1985). By the early 1980s more Brazilians joined the movement. The official figures of the 1980s record numbers between 7,000 and 9,500 Brazilians across the UK (Kubal et al., 2011). At that time the Brazilian migrant community mostly consisted of students, or young people who came to the UK for a couple of years to learn English and ‘to see the world’. Changes in immigration rates from the 1970s and 1980s seem to be directly linked to the political and economic liberalisation that took place in Brazil with the ending of the military dictatorship in 1985. From that time onwards passports became easier to obtain, the number of airlines, travel agencies, and visa facilitation services increased greatly, and English language took a place in the national educational curriculum.

It was however, from 2002 onwards that the scale and the profile of Brazilian migration to the UK changed significantly and became particularly visible. The instability caused by the economic crises in Brazil at that time has been identified as an important factor in the growth in emigration figures (Kubal et al., 2011). The two main reasons for emigrating from Brazil during that period were to find work and to

earn money and Britain turned out to be a prominent destination following changes in the US immigration policy after 9/11. Since the late 1980s, the US was the most popular destination for economic migration from Brazil (Margolis, 1998).

Although economic reasons still play an important role in the Brazilian migratory movement to the UK, it is less prominent than in the early 2000s. In the study conducted by Evans et al. (2011), participants identified a variety of reasons for coming to the UK including a search for opportunities such as study and work, cultural enrichment, and working to save money to invest in Brazil (i.e. properties, business, children's education, etc). A substantial number of participants (21%) also indicated that they came to the UK with the full intention of staying permanently.

The different factors motivating the decision of Brazilians to come to the UK is in line with the trends seen in many other migratory groups, as Britain today presents a range of simultaneous reasons for attracting legal and illegal new comers. One set of reasons for attracting foreigners continues to refer to Britain's high economic performance (including low unemployment and job shortages in some sectors) together with growing inequalities in many developing countries offering them possibilities of better educational and employment opportunities. It is in this context of inequalities that it is possible to predict that Brazilian citizens will continue emigrating at the same pace from their home country in search of a better life in countries like the UK. The problematic economic disparities among population groups in Brazil have not, unfortunately, been rectified by the economic growth experienced in Brazil in recent years. Overall, social mobility is noticeable in the wider society, however, the cost of living in Brazil is also rising and the gap between rich and poor is very significant. Furthermore, the population from all social classes is

demanding urgent investment and improvement in the education system, health services, public transport, and also for an end to the corrupt system that dominates the political arena. Such demonstration against high cost and poor services was exposed to the world in 2013, with the broadcasting of numerous riots that took place on the streets of many cities in Brazil. These riots found support in the international community and in particular by Brazilians residing outside Brazil. In London for example, thousands of Brazilian gathered at Parliament Square in London to show support for their counterparts in Brazil.

Related to the lack of investment in the dominant public sectors in Brazil, is the problematic level of violence found in the country. As reported by Margolis (1998), high exposure to violence in Brazil is frequently voiced by Brazilians residing in the USA as a reason for not returning to Brazil. It can also be said that economic reasons might continue to play a great part in the motivations of Brazilians to continue coming to the UK in the years ahead. Particularly, amongst those people who struggle to sort out their financial debts because of the amount of credit undertaken. Easy accessibility to credit is a major economic strategy that continues to drive Brazilian's economy to growth. By the end of 2013, 63% of the Brazilian population were in debt, with 76% of this population in debt due to credit cards (ABECS, 2014). With easier access to travel abroad, some Brazilians might continue to take this opportunity to come to countries like the UK with an initial aim of working hard to pay back debts in Brazil. Finally, the most recent economic downturn (the 2008 to present recession) experienced in some countries in Europe (Portugal, Spain, and Italy, in particular) is, according to the Association of Brazilians in the UK (ABRAS), one of the main reasons that brings a considerable number of Brazilians that were residing and working in those particular countries, to the UK.

### 2.2.3 Where Do They Live?

As illustrated above, the majority of Brazilian immigrants reside in and around London. The 2011 Census showed that 31,357 Brazilian-born immigrants were residing in London by the time of the survey, however, community groups estimate that between 130,000 and 160,000 Brazilians were likely to be living in London (Evans et al. 2007). Within London, it was estimated that 30,000 Brazilians reside in the Borough of Brent. Interestingly, in the 2011 census Brent was, after Newham, the London borough with the second lowest proportions of White British living in it (ONS, 2012), which suggests that Brazilians in London reside in multi-ethnic areas. Other areas in London with a large presence of Brazilian immigrants are Stockwell and Bayswater (popularly referred to as 'Brazilwater' by Brazilians in London).

The Evans et al.'s (2011) report shows that Brazilians are, in fact, dispersed across London. Figure 2.1 illustrates the boroughs of residence of those who took part in Evans and colleagues' survey.

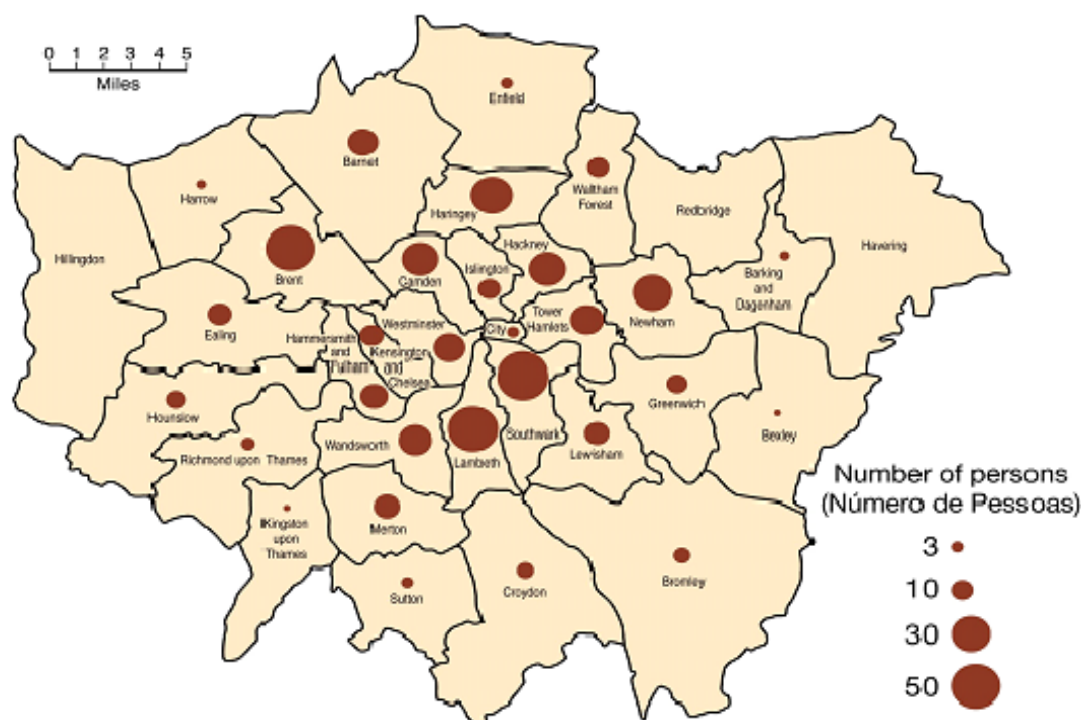


Figure 2.1 Borough of Residence in London from Evans et al.'s (2011) Report

As can be seen, the boroughs that make up Inner London host the main concentrations of Brazilians (i.e. Westminster, Camden, Islington, Hackney, Tower Hamlets, Southwark, Lewisham, Lambeth, Wandsworth, Hammersmith and Fulham, and Kensington and Chelsea). Besides London, there are numerous other locations in England with a sizeable Brazilian community. Figure 2.2 below represents an estimate of this distribution across England. This figure was developed by the Brazilian Consulate in London and it was made very clear by the officials that worked on this estimation that these figures are not accurate statistics. In fact, fewer than ten thousand Brazilians are formally registered with the consulate.



Figure 1.2 *Geographic Distribution of the Brazilian Community in the UK, 2005*

Additionally, the Brazilian Consulate highlighted an increasing number of Brazilians living in Northern Ireland (IOM, 2005)

#### **2.2.4 Entering in the UK: Visas and Residence Status**

According Evans et al.'s (2011) study of Brazilians in London, 'Visitor Visas' appeared to be the most popular channel of entry to the UK (39%). The second most popular channel was through the possession of a European passport (27%), while only one quarter of those surveyed reported entering the country on a 'Student Visa'. The 'Residence Visa' accounted for 5% of those surveyed, while 'Working Permit Visa' was the least popular means of entry to the UK (4%).

Regarding actual migratory status among participants in the London survey, there were few changes compared to the status of first entry to the UK. One of the most notable changes refers to the increased number of European passport holders (43.9%) with Italy being by far the most mentioned country to have granted citizenship to Brazilians. Other countries mentioned were Portugal, the United Kingdom, Spain, Germany, and a few cases in France and Austria.

Evans et al.'s report also shows that around 17% of the Brazilians sampled at the time of their participation in the survey were resident in the UK, or the spouse of a resident. The countries most frequently mentioned as having awarded citizenship to spouses were Italy, Portugal, and the United Kingdom. Moreover, only 5% of the sample reported holding a student visa at the time of their participation in the survey, whilst even lower proportions reported holding a work permit (2.9%), or a visitor visa (2.5%). Some 29% of the Brazilians reported holding an expired visa. Figure 2.3 illustrates changing patterns in immigration status from their entry into the UK up to



their time of their participation in the survey. Indeed, these changes are themselves dictated by the conditions attached to each type of visa.

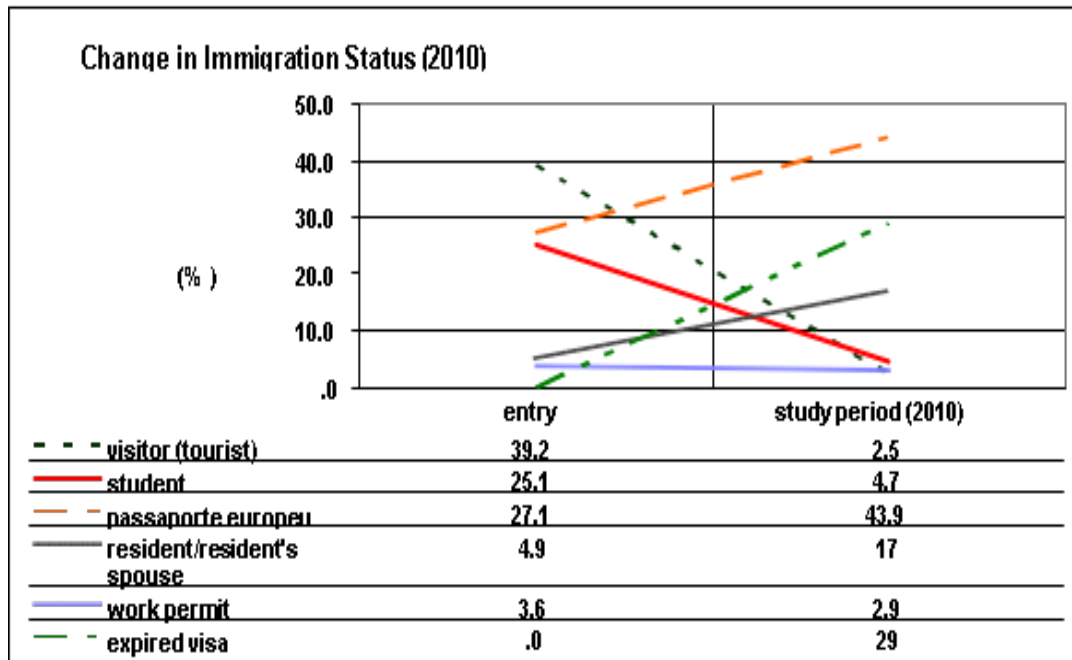


Figure 2.3 *Change in Immigration Status from Evans et al.'s (2011) Report*

The popularity of a European passport amongst Brazilians is due to the large proportion of the population in Brazil being descendants of the many European settlers who arrived in Brazil in the nineteenth and twentieth centuries. Although completely reliable data on the inflow of immigrants at that time in Brazil is not available, Szymanski and Bogus (2006) estimated that between 1836 and 1968, a group of 3.38 million people coming from Portugal and Italy settled in the country. Other large groups of immigrants that arrived in the country during that period include people coming from Spain, Germany, Austria, Poland and France. The great majority of these European immigrants settled in the south and south-eastern regions of Brazil, and their descendants are in many cases allowed to invoke the *jus sanguinis* (from the Latin *right of blood* - a principle of nationality law by which citizenship is not determined by place of birth but by having one or both parents who are citizens

of the state), which in turn allows them to claim their European citizenships. The features of this European migratory process to Brazil is well represented in the Brazilian community in the UK, in particular among those immigrants coming from states in the southern and south-eastern regions of Brazil (Evans et al., 2007; Evans et al., 2011; Kubal, Bakewell & Haas, 2011). As the European passport offers legal residence and unrestricted employment in the UK, the demand for such a document is notable amongst Brazilian immigrants and has resulted in the establishment of law companies in London (e.g. London Help 4 U; Nara' Solicitors) that specialise in documenting the European ancestry of many Brazilian immigrants and helping them apply for EU citizenship.

### **2.2.5 Are Brazilian Immigrants Staying Temporarily or Permanently in the UK?**

Because there is no reliable data reporting the number of Brazilians departing from the UK (nor any other nationality), it is not possible to rely on existing data.

According to the latest England and Wales Population Census (2011) the number of Brazilian-born residents increased from 15,215 to 50,570 during the ten years census' period. From December 2012 to 2013 alone, the number of visas (excluding visitor and transit visas) issued for Brazilians increased by 65% (ONS, 2014).

Although such figures do not fully answer the above question it might provide a good leading indicator for some trends.

Moreover, some scholars have suggested that although a large number of Brazilians tend to say their aim is to return to Brazil one day, an exact return plan is rarely seen. Kubal et al. (2011) pointed out that a large proportion of those Brazilians living in the

UK for several years (7 to 10 years) had an initial plan to stay for only 2 to 5 years. Thus, while a large proportion of Brazilians see Britain only in terms of temporary residence, it is not clear whether the return is indeed happening as fast as initially planned.

### **2.2.5 Brazilian Immigrants in the British Society: Cultural Contact and Cultural Change**

A study exploring the position that the Brazilian community has in British society has yet to be carried out. Subsequently, there is no evidence about any integrative aspects of this community in the UK. Studies about the dynamics and consistence of the community like the ones cited above do however exist. From these studies it is recognised that the Brazilian collective movement is increasing in the UK as represented by the number of establishments like, churches, professional services that focus on the Brazilian public, although the community remains largely invisible in the multi-ethnic Britain compared to other ethnic communities.

Nevertheless, over the last decade Brazil has become more visible through a diversity of cultural influences. According to Frangella (2011), in London today there are a range of activities involving the Brazilian thematic, whilst some of the cultural manifestations are produced to meet the demands of the community, others are events organised in London related to media environments, commercial imagery associated with Brazil. Although there are today a vast number of events about Brazil across London, often they are not of great interest to immigrants as many consider such events very expensive and they do not necessarily represent the cultural trends of the community.

In parallel, Frangella (2010) also pointed out that in the last five years Brazilian culture has become a source of contact between Brazilian residents and Londoners. This is particularly noticeable amongst those Brazilians who are already rooted in the city and seeking to extend the access of the Brazilian culture to Londoners by creating, for example, bilingual magazines and other mechanisms that do not reach the public interest of Portuguese speakers. Thus, the cultural field is promoted by Brazilians who live here, but it is not directly designed for them. The permanence and activities of those Brazilians who are expanding the Brazilian culture beyond the borders of Brazil, may end up weaving relationships and boundaries of work and sociability in the city.

An overall analysis of Frangella's (2010) findings suggests that there is a strong sense coming from the British population of knowing and discovering Brazil, which is characterised by the significant increase in cultural activities related to Brazilian culture in the UK. It might be that Brazilian immigrants are in part encouraging or facilitating this process, however, it is more likely that due to the recent economic boom and the fact that the two major sporting events in the world (2014 FIFA World Cup and Rio 16 Olympic and Paraolympic Games) are hosted by Brazil, British people have recently experienced the country as being constantly in the spotlight, rather than the presence of Brazilians in the UK.

With regards to behaviour patterns, there is no research-based evidence about whether Brazilian immigrants are adopting British cultural tendencies. However, reports from organisations responsible for assisting Brazilian immigrants in the UK report that young Brazilians in the UK are misusing alcohol and other drugs more than they do in Brazil (i.e. Association of Brazilians in the UK), though it is unknown

what is related to such behaviours.

The problematic use of alcohol and other drugs amongst young Brazilian immigrants is in line with several studies indicating that substance use, and misuse patterns, amongst some minority ethnic groups in the UK are high (i.e. Bayley, 2010; Beddoes et al., 2010; Fountain, 2009; Hurcombe et al., 2010). The next section will focus on evidence from these studies, and explore the main reasons for immigrants and members of minority ethnic groups using and misusing such substances.

### **2.3 SUBSTANCE USE AMONGST MEMBERS OF MINORITY ETHNIC GROUPS**

Although there is a large body of evidence suggesting that levels of alcohol and substance use and misuse in the UK are generally lower in minority ethnic groups, evidence of the real prevalence of substance use in members of such groups is sparse (i.e. Erens et al., 2001; Beddoes et al., 2010). The dearth of evidence on the prevalence of alcohol and drug use within ethnic communities is exacerbated by reports from the general population and school surveys indicating that minority ethnic respondents - particularly South Asians - are less likely than white respondents to use illicit substances (Fountain et al., 2003). However, given the disparity in numbers of participants from minority ethnic groups compared with the white participants in such large-scale surveys, a clear report of the prevalence of alcohol and substance use across ethnic groups is problematic. Moreover, since substance use is highly stigmatised within many ethnic communities, levels of use in these communities may be underestimated as such stigma constitutes an important barrier that may lead participants to not reveal information about their substance use (Beddoes et al, 2010;

Fountain et al., 2003).

Notwithstanding, some important work has been carried out in the UK providing epidemiological data related to substance use across ethnic groups, as well as drug prevention approaches designed to target members of these groups (e.g. Bashford et al. 2003; Bayley, 2010; Erens & Laiho, 2001; Fountain, 2003; Fountain, 2009abcd; Heim et. al., 2004; Hoare, 2010; Orford et. al., 2004; Ross et al., 2004; Sharp & Budd, 2005). In addition, the differing needs and challenges associated with alcohol and drug use across minority communities within the UK has led the government, local partnerships, commissioners and service providers to seek out measures for addressing the challenges of meeting the needs of a range of diverse groups over the years. In 2010 for example, the UK Drug Policy Commission (UKDPC) launched a review of the UK literature on factors relating to drug use among minority ethnic communities (Beddoes et al., 2010). Among the factors pointed to by the review were: high rates of drug use among mixed race individuals; low overall levels of drug use reported by people from Asian backgrounds (Indian, Pakistani or Bangladeshi); cannabis being the most commonly used drug across all ethnic groups and age groups; polydrug use being most common among White ethnic groups compared with other ethnic groups; men are more likely than women to use any illicit drugs in many ethnic groups; and types of drugs that cause individuals to seek help vary between different communities. In relation to heroin use, prevalence data indicates that levels of use in Asian groups is low compared with other ethnic groups. Nonetheless, heroin may still be problematic amongst some members of this community, although the tendency is to smoke rather than inject (Beddoes et al., 2010).

Fountain et al. (2003), in their review of the literature on drug use and related

services for Black and Minority Ethnic groups in England, report that the high prevalence of drug use across ethnic communities in England has been called to the attention of researchers and service providers since the early 1990s. At that time for example, a number of studies had investigated the perceptions of minority ethnic communities on the prevalence of drug use and there were indications that in some areas and within some communities, drug use was perceived as increasing and as prevalent as within the white English population (Fountain et al, 2003).

Parallel to drug use, the prevalence of alcohol use across minority ethnic groups in the UK has also showed indications of increasing. The changes in how ethnic communities use alcohol was addressed in Hurcombe et al.'s (2010) review from the UK's research on the prevalence of abstinence and drinking patterns within ethnic groups from the period of 1995 to 2010. In this review, the authors pointed out that when compared with the white British population as a whole, most minority ethnic groups tend to have higher rates of abstinence and lower levels of frequent and heavy drinking, although when comparing rates of alcohol dependence both minority and majority groups were found to have similar levels. Moreover, the authors stressed that drinking patterns vary significantly between and within ethnic communities. For example, abstinence is high amongst South Asians, in particular those from Pakistani, Bangladeshi and Muslim backgrounds, but those men of Pakistani and Muslim background who do drink do so more heavily than other non-white minority ethnic groups. Individuals with mixed ethnic backgrounds are more likely to drink heavily compared to other non-white minority ethnic groups. Members of the Indian, Chinese, Irish and Pakistani groups who are on higher incomes tend to exceed the recommended alcohol limits. Another point of interest is the generational changes in drinking habits among some ethnic communities. For example, it has been noted that

there is an increase in frequency of drinking and heavy drinking episodes among Indian women and Chinese men, and also an increase in consumption of alcohol by Sikh girls, whilst a decrease in consumption from the first to the second generation of Sikh men has also been noted. Another important point stressed by Hurcombe et al. (2010) was the high risk of alcohol-related harm that some individuals from particular ethnic groups are exposed to. This is particularly noticeable amongst Irish, Scottish, and Indian men, and by Irish and Scottish women as they are amongst those who have a higher number of alcohol-related deaths than the national average in England and Wales, whilst Sikh men are overrepresented for liver cirrhosis.

### **2.3.1 Reasons for Minority Ethnic Communities Using Alcohol and Other Drugs**

A number of studies have explored minority ethnic communities' perceptions of why they and their communities use alcohol and drugs. Overall, reasons appear to vary between and within minority ethnic groups and in some cases overlapping with the general British population. That is not to say that common reasons across ethnic communities do not occur. Some common reasons do indeed appear, however, others are more specific to other factors like, for example, the type of substance used.

One of the primary reasons why alcohol and drugs are used amongst some members of ethnic communities is peer pressure. The influence of peers on substance use in the ethnic context is particularly noticeable amongst those young people who seek to distance themselves from their family cultural values in order to fit in the western culture. Beddoes et al. (2010) revealed that the growing influence of western cultural trends on young people has particularly manifested amongst the south Asian community. Supporting the assumption of peer influence are studies that show that



people that have more friends from different ethnic group are more likely to drink alcohol than their friends from the same ethnic group (Heim et al., 2004; Purser et al., 2001).

Social exclusion in terms of poverty, housing deprivation, educational disadvantage and discrimination in the UK's labour force have also been identified as other contributing factors to alcohol and drug use amongst some members of ethnic communities. Despite the fact that social exclusion is not a unique feature of minority ethnic groups, much has been written about the high prevalence of this problem within minority ethnic communities (Fountain et al., 2003). In a report developed by Bashford et al., (2003) as part of the UK Department of Health's needs assessments project, the authors argue that very often people from minority ethnic groups live in disadvantaged and deprived areas where housing is overcrowded and where drug users and seller reside. When coupled with high unemployment, isolation and social exclusion these social and economic circumstances can in turn lead to feelings of frustration, boredom and anxiety from which substance use might provide some form of short-term pleasure and relief (Bashford et al., 2003; Fountain, 2003; Nabuzoka & Badhadhe, 2000; Patel & Wibberley, 2002).

In a small qualitative study conducted by Kalunta-Crumpton (2003) with drug users attending a treatment service provider in London, the author found that social exclusion plays a pivotal role in Portuguese and Italian drug users. According to this study, since Portuguese and Italian people come from cultures within strong extended family systems, the experience of living in the UK might bring these people the feeling of being dislocated and isolated. Due to this, these groups are in vulnerable positions and may be predisposed to end up socialising with fellow drug users. The

author also argues that such feelings may help to explain why some of these people end up socializing only within their own ethnic group, which can result in further isolation from mainstream culture. Other factors stressed by Kalunta-Crumpton (2003) that increase the risk of Portuguese and Italian groups using drugs, include language barriers and unstable accommodation. In fact, a considerable number of drug users from these groups were reported in Kalunta-Crumpton's study as having 'no fixed abode'.

In line with this lies the dramatic increase of homeless people from minority ethnic groups in the last decade found in the main UK inner cities, which has been reported by a number of homeless service agencies' statistics (i.e. Homeless Link 2006, 2008, 2010; CLG 2008). In this scenario, people from Eastern European countries account for a large proportion of the homeless people in Britain. According to Homeless Links for example, in 2006 the percentage of Eastern Europeans in London who were sleeping rough stood at 15%, whilst in 2008 this had jumped to 25%. At the local level the numbers can be even more striking, as numerous Day Centres or agencies reported that around half of their client group comes from Eastern Europe, and in some cases Eastern Europeans comprised up to 80% of their clients (Garaphic, 2011). In 2007, the problematic alcohol consumption and street drinking within the Eastern European population of homeless immigrants was embraced by the UK Alcohol Policy as noted in the following: *"An increasing number of authorities are becoming aware of migrant workers from A8<sup>1</sup> countries who have not successfully found employment and are engaging in street population activities including street drinking, rough sleeping, begging and associated Anti Social Behaviour (ASB) and low level crime. These individuals, like existing street populations, are vulnerable to a range of threats including ill health, exploitation, crime and often have histories of alcohol problems,*

*homelessness or mental health issues*" (Alcohol Policy, 2007, p. 1). Fitzpatrick et al. (2009) further distinguished two types of individuals among the homeless population who are originally from A8 countries. The first one refers to those individuals that came to the UK with pre-existing conditions, with a troubled history of institutional confinement, prison, unemployment, homelessness and most importantly substance misuse. The second refers to individuals who have descended into poverty and subsequent substance misuse after migrating to Britain, and their descent into homelessness is linked more to the structural factors resulting from their precarious position in the labour market. Due to loss of work, economic downturn or personal circumstances they run into difficulties, cannot pay rent, are unable to find work and end up sleeping rough.

Broadly speaking, scholars generally agree that there is a combination of individual and structural factors that underlie the susceptibility of an individual to misuse alcohol and other substances. Similar to the two proposed identifications of Eastern European homeless population in London (Fitzpatrick et al., 2009), it could be said that the problematic alcohol and substance use across non-homeless ethnic populations in Britain may result from a combination of individual and structural factors associated with the individuals' mainstream culture. In the same way, it could also be argued that the interaction between individual factors and structural factors emerging in the new cultural context contribute equally to place minority groups at risk of alcohol and substance use problems.

The two facets of this aetiology are well represented in the Patel et al. (2005) report of khat use amongst the Somalian communities in England, where the chewing of khat leaves is a practice taken from the mainstream culture. By exploring the

amount of khat used in the first generation of immigrants, Patel et al. found a similar proportion in the number of khat users across the three groups of Somalian immigrants according to how it is perceived the amount of khat use since being in the UK: those who perceived an increase in the amount of use; those who perceived no difference in their khat; and those who perceived a decrease in their khat use. Similar to how it is in Somalia, the use of Khat amongst the Somalian community in England holds a great collective aspect of social/recreational activity, however, for those Somalians that perceived an increase in their khat use since living in the UK a desire to cope with negative emotion or the impact of a variety of socio-economic factors were pointed to as the most common reasons for increased use.

The role of alcohol and substance use as a coping mechanism for dealing with individual and/or social adversities has been well documented in the literature. In the case of minority ethnic groups in the UK however, much of the existing work has focussed on substance use as a means of dealing and coping with adversities imposed by social and economic strains as described above. It remains mostly unknown to what extent the process of adapting to British society is affecting psychological aspects of these individuals, for example, the impact of transcultural identities on patterns of alcohol and substance use. In the face of such a lack of understanding, it is difficult to provide explanations about whether the increase of substance use in ethnic communities is caused by a combination of variables under the influence of individuals' values and norms within their mainstream culture, by the interplay of variables between mainstream and receiving cultures, or by the experience of being an immigrant and member of a minority ethnic group by itself. More information is therefore required on how the interaction of multiple variables, which come with the immigrants and those which arise through migration to the UK, is affecting the use

and misuse of alcohol and other drugs, as well as the stress caused by dealing with this complex set of values.

## **2.4 ACCULTURATION AND SUBSTANCE USE**

The psychosocial variables that lead to the use and misuse of alcohol and other drugs in immigrants are found in modern studies of immigrants of numerous origins.

Overall, theorising has concentrated largely on two possible explanations related to the immigrant experience that leads to use and misuse of substances: the stresses related to the processes of immigration and the acculturation approaches. Although both explanations can be explored as two distinct concepts, much of the evidence from the field of alcohol and substance use today suggests that both concepts are in fact interconnected. It would appear that the changes that acculturation cause in the individuals can lead to the development of psychological distresses such as stress and interpersonal conflict.

A range of studies mostly focusing on African and Latino communities in the US, have explored the relationship between immigrant acculturation experiences and their patterns of substance use, though the unidimensional model has been the most prominent within the field of psychology. From this model, two particular approaches – the assimilation approach and the acculturation stress approach - have been largely applied to describe the changes in patterns of alcohol and substance use and misuse that can occur through the acculturation process. With respect to the assimilation approach, the view is that immigrants' substance use patterns converge with the host culture as they become more integrated into the new social environment. Supporting this view, Adrian (2002) suggests that those individuals who move from places with

low rates of alcohol consumption to a place of high indices of consumption are at a greater risk of increasing their consumption than those individuals who are coming from places where rates of alcohol consumption are higher than the host culture. A set of factors like length of residence, peer pressure, exposure to social drinking practices and the hosting society's open views about drug use are among the factors that leads to an increase in immigrants' risk of alcohol and substance misuse along the acculturation process. The assimilation approach found great support in a series of studies exploring changes in patterns of alcohol and drug use amongst the Latino community in America. An example of this is De la Rosa's (2002) study of substance abuse among Latino adolescents in which greater integration to the American culture was associated with more substance misuse. Similarly, Amaro et al. (1990) found that marijuana and cocaine use were greater among Latino groups in the U.S. who were acculturated into American society, and their findings further indicated that acculturation was more strongly associated with drug use among less educated Latinos. In another study carried out in America, Collins and McNair (2002) revealed that alcohol abstention was higher among the first generations of Mexican women immigrants than among women in the general American population and also among their counterparts in Mexico. However, over the course of three generations, the drinking profiles between Mexican American women and the general American population were not significantly different.

Conversely to the assimilation approach that suggests increased time of residence in the new country will result in a corresponding change in the risk of substance misuse, as individuals gradually adopt the values and norms of the host culture; the acculturative stress approach suggests that living in a new country will, after a period of time, reduce the risk of substance use if pressures arising from the acculturation

process are resolved. This acculturative stress approach means that alcohol and substances are used by immigrants as a coping mechanism for dealing with stress that emerges from the acculturative process. The effect of the stress has been hypothesised to be most intense in those who do not feel accepted or acculturated into the new society as a consequence of high exposure to frustration due to discrimination, poverty and restricted economic opportunities, poor quality housing, language barriers, cultural marginality, family separation and other forms of social isolation, and loss of social status (Johnson et al., 2002; Markides et al., 1990). Dotinga et al., (2006) report this phenomenon in a study about the drinking behaviours of Turks and Moroccans in the Netherlands, where higher drinking rates were found in those who did not feel accepted into Dutch society, than in those who were integrated and living there for a longer length of time. Examples of the relationship between acculturative stress and substance use is also found amongst those young people who are highly invested in their ethnic identities and have trouble integrating into the host culture. Evidence suggests that in an effort to meet their personal and social needs these young people end up identifying themselves with other youths who also are having the same difficulties integrating into the host culture. As a result, these youths will form peer groups and acceptance in this context is achieved in part through drug use (Bacallao & Smokowski, 2007; Barrera et al., 2002; Oetting, 1993). Research also shows that increased acculturation stress has also been linked to a decrease in family contact and an increase in conflict behaviour that leads to an increase in both internalising and externalising problems among Latino adolescents in America (Smokowski & Bacallao, 2006, 2007). In general, evidence shows that in the context of acculturation parent-adolescent conflict is exacerbated when parents (usually first generation immigrants) keep strong ties with their native culture whilst their

children become interested in learning about and following the norms and attitudes of the host society. Due to parents' difficulty with understanding the culture to which their children are being exposed, these youths are more prone to get into conflicts with family members and to be influenced by deviant peers (Bamaca & Umana-Taylor, 2006; Unger et al., 2000).

Overall, both the assimilation and stress acculturative approaches underpin some important mechanism that relate to the acculturation process and the vulnerability of immigrants to engage in risk behaviours. However, in an attempt to place the immigrants' contact experience with the new culture into a perspective based exclusively on the preservation of one culture or the other, both approaches fail to distinguish the effects on patterns of substance use of those who are highly committed to both cultures or those who are not involved in either culture. In addition, these approaches fail to explain the potential impact that interpersonal conflicts and strain arising from the dilemma of maintaining or losing the original culture have on substance use behaviours. For example, most of studies adopting the assimilation approach show that length of residence and language proficiency is associated with integration, which in turn is associated with high risk for substance use as a result of the tendency to adopt the views and habits of the host society. It is not clear however, whether the pressure of maintaining cultural identity plays a part in substance use amongst those highly integrated or amongst those who feel they do not belong to the country of origin or to the new one. In a similar way, not much is known about the impact that stress caused from negotiating more than one set of values, norms and identities has on substance misuse amongst those people living in an environment with more than one culture. It is argued in this context, that more information is required on how acculturation as a combination between culture



maintenance and contact might influence the increase in the risk for substance use problems. By identifying such influences, it might be possible to draw a more generic framework that embraces evidence of when and how factors such as length of residence and strong cultural ties tend to be factors of risk or protection for using and misusing alcohol and other drugs.

### **2.4.1 Measuring Acculturation**

Acculturation is a dynamic, multifaceted and complex process, although proxy measures are widely used when examining the relationship between psychological acculturation and specific health issues including substance use. Among the most common ways of measuring acculturation are: language proficiency, participation in cultural practices in the hosting community, social relationships, perceived discrimination, sense of belonging, and importance of honouring cultural traditions (Salant and Lauderdale, 2003). In general, when acculturation as a variable is applied to explore the relationship between some determinants of health and health outcomes, it tends to be used mostly as a mediator or as a moderator. Thus, because proxies do not directly measure elements of acculturative change in attitudes or behaviours, the information provided by applying proxy measures of acculturation might be of limited use in helping to understand how the process of acculturation is actually influencing individuals' health outcomes.

Overall, the issues around the measurement of acculturation lie with the difficulty in capturing fully the underlining changes that occur in individuals and communities under the acculturation process. An example of this are instruments focussing primarily on language usage (e.g. Negy & Woods, 1992; Martin, 1998; Norris et al.,

1996). Although changes in language use may reflect deeper acculturative change it might only represent one facet of the acculturation process as language acquisition can arise due to other reasons that are not uniquely related to the desire to integrate in the host culture. Other reasons for acquiring the host culture's language include the necessity of language use and media availability.

According to expertise in the field of acculturation, the difficulty of measuring what changes in the individuals along the acculturation process is largely influenced by the unclear conceptualization of acculturation. As researchers have often used varying conceptions and operationalization of acculturation, the term had been broader in concept and narrower in terms of how it has been measured. This concern about various conceptions of acculturation has been the focus of a recent debate in the scientific community in America as a result of the different approaches applied to explore acculturation and health disparities among Latino immigrants (for more details on the debate about acculturation measurement see Class-Lopes, 2011; Schwartz et al., 2010; Hunt et al., 2004; Matsudaria, 2006; Thomson & Hoffman-Goetz, 2009).

Historically, the conceptualization of acculturation has evolved from a simple definition concerning the adoption of beliefs and behaviours from members of one group to other groups to today's conceptualization of acculturation as a multidimensional process in which individuals and groups undergo several stages of adjustment. Recently research also demonstrated that the changes that occur under the acculturation process are continuous through the immigrant's life and other factors that are not only related to ethnicity or culture of origin also affect the manner in which the process of acculturation proceeds (Caplan, 2007; Matsudaira, 2006).

This is particularly the case in the role that contextual factors play along the acculturation process. In general, contextual factors refer to ecological conditions such as place of residence, size and form of a family unit, school system, as well as the presence of various social constraints including racism and prejudice (Pantin et al., 2004).

Thus, although the theory of acculturation today emphasizes a range of facets and domains in which a series of factors will interplay under the acculturation process, in practice the majority of the research exploring the impact that acculturation might have on immigrants' alcohol and substance use behaviours have continued to follow a simplistic and unidimensional operationalization of acculturation in their measurements.

### **2.4.2 Directions for Improving the Measurement of Acculturation in Alcohol and Substance Use Research**

As cultural and social changes are the central element of acculturation, it seems plausible to argue that this matter needs to be further explored in relation to alcohol and substance use rather than merely be the focus of theoretical explanations. As described above, the unidimensional operationalisation of acculturation and its measurement tends to limit the possibilities of properly exploring the process of acculturation changes. Class-Lopez et al. (2011) suggest that such a barrier can be confronted within a conceptualisation of acculturation which frames it within a multicomponent explanation of the changes that acculturation gives rise to. Based on the concepts of acculturative changes proposed by Locke (1998), Class-Lopez et al. argue that there are three particular domains in which acculturation changes can be

analysed: *attitudes, behaviours, and values*. In the case of alcohol and substance use, acculturation changes in the attitudes domain can provide information of possible changes in how immigrants perceive the harmfulness of certain substances. For example, immigrants that come to the UK from countries where cocaine is viewed as a dangerous drug might change their perception about the harmfulness of this substance due to the high prevalence of cocaine use present in various strata of British society. In a similar way, in the behavioural domain acculturation changes might invoke changes in drinking style. For example, immigrants arriving from countries where alcohol is consumed in greater quantity per episode might maintain their drinking style whilst also adopting the British drinking style, which involves more frequent drinking episodes. With regard to values, in cases when immigrants come to the UK from a collectivistic society, acculturation may increase their value and acceptance of individualism and self-directed growth, as a consequence, the social stigma attached to the use of illegal drugs may begin to decline in the face of ongoing exposure.

Thus, by exploring changes under the acculturation process across attitudinal, behavioural, and value domains, it might be possible to generate a more comprehensive analysis of the entire acculturative process. However, to be able to understand the detailed mechanisms of changes in these domains, not only is it important to understand the actual culture where the immigrant groups are now residing, it is also important to understand the culture where these groups have come from. Surprisingly, the majority of researchers in the field of acculturation and substance use have failed to address any investigation of actual past and present drinking and substance use patterns in the immigrant countries of origin. In a systematic review of articles on acculturation and health research on Hispanics in the

US, for example, Hunt et al. (2004) claimed that most of the research readily describes behavioural trends and practices of foreign cultural traditions, with little effort being made by researchers to explore or document the presence or absence of health behaviours and practices in the immigrant country of origin. Consequently, if cultural and social changes are the central elements of acculturation, how can we trace any changing patterns in alcohol and substance use among immigrants without knowledge of what the life and culture actually is in their country of origin?

Gutmann (1998) argues that when patterns of alcohol and substance use in the immigrants' country of origin are recognised, the literature often adopts an implicit assumption of cultural homogeneity rather than diversity in the immigrants' home countries. Additionally, the author claims that within the literature there is a lack of recognition of any changes that may be taking place in the immigrants' home countries. Brazil is a clear example of what Gutmann is describing. Recent research has revealed an increase in rates of alcohol consumption in the country, which has been largely attributed to the economic growth that the country experienced in the last ten years (Laranjeira et al., 2010). In particular, young people are drinking more, and consuming their first drink of alcohol at a younger age. Heavy and frequent drinking has also increased among Brazilian women, who are now consuming amounts similar to their male counterparts (Levantamento Nacional de Alcool e Drogas, 2012). Therefore, to be able to understand the high levels of alcohol and other drug use in any ethnic group in the UK, it is also important to consider the context of changes in substance use rates in their home countries. The current situation of substance use amongst Brazilian immigrants in the UK might, for example, be influenced by changes in consumption patterns in Brazil, as well as being influenced by exposure to consumption patterns in the UK.

The following section focuses on current trends in substance use in Brazil. The aim is to present further information about the transformative and heterogenetic characteristics involved in substance use across the country.

## **2.5 PATTERNS OF SUBSTANCE USE IN BRAZIL**

In line with many other developing countries, in the last decade Brazil has experienced a remarkable increase in the number of people using licit and illicit substances (Madruga et al., 2012; UNOCD, 2012). The current increase in substance use in Brazil has been the focus of a range of epidemiological studies (e.g. Bastos, 2007; Caetano et al., 2011; Madruga et al., 2012; DeMicheli & Formigoni, 2007). Studies have detected, for example, that there was an increase in cannabis use in the young population (Madruga et al., 2012). In previous studies carried out in the 1990s, inhalants/solvents were the most prevalent types of drugs used by adolescents (Galduróz et al., 1994, 1997; Souza & Martins, 1998), whilst today cannabis is the most used illicit drug across all age groups in the country (Madruga et al., 2012). In addition, by comparing national surveys, De Micheli and Formigoni (2005) pointed out that not only has cannabis become the most prevalent illicit drug used, but there is also a significant increase in both lifetime use and frequent use of cannabis. In another survey conducted about the profile of the cannabis using population in Brazil, Jugerman et al. (2010) found that the main factors associated with higher probability of cannabis use were being male, aged between 18 and 30 years, being single, being unemployed, and living in the South and Southeast regions of the country. Higher income and living in a metropolis were statistically significant only before adjustment for these socio-demographic variables. Jugerman and colleagues (2010) also found

that the use of cannabis tends to be higher in large urban centres compared to smaller towns and rural areas. The authors suggested that easy access to the drug and the cultural aspects attached to some groups in the urban settings might encourage the use of cannabis. By comparing findings with studies conducted in other countries, Jugerman et al. (2010) argue that despite this significant shift in cannabis use, the prevalence of use in Brazil seems to remain lower than the prevalence found in several other Latin America and European countries.

Studies also revealed an increase in the use of cocaine. According to the United Nations Office on Drug and Crime (2012), Brazil is one of the emerging nations where the use of cocaine - used either in intranasal (powder) or smoked (crack) – is increasing. By adopting a probabilistic methodology, Abdala et al. (2014) found in a national household survey that 2.2% of their sample, which represents nearly 3.2 million people (aged 14 years and older), has used some form of cocaine (snorted or smoked) during the previous year in Brazil. Approximately 2 million Brazilians have smoked cocaine at least once in their lifetime - 1.5% among adults and 0.8% among adolescents - and one in one hundred adults used crack in the past year. In addition, Abdala et al. (2014) shows that almost half of the users in their study (45%) have tried cocaine for the first time before 18 years of age. The use of cocaine by adolescents has been highly related to school non-attendance. Based on probabilistic estimations and current figures of cocaine use across the globe, Abadala and colleagues concluded that Brazil is most likely among the greatest consumer markets for cocaine worldwide, probably only coming behind the United States of America.

In addition to the cannabis and crack/cocaine issues, widespread alcohol misuse and dependency and associated problems, are also of a greater public health concern in

Brazil today. Results from the latest Brazilian National Alcohol and Drugs Survey (2012) pointed out a strong tendency for increased alcohol consumption in the country. From 2006 to 2012, for example, the percentage of the population that used to drink once or more than once a week increased by nearly 20% (from 45% in 2006 to 54% in 2012). A particularly significant increase was found among women (from 29% to 39%). Binge drinking also showed a significant increase during this six-year period (from 45% to 59%), with a highly significant increase found among women (from 36% to 49%). Notwithstanding, previous studies also show that so-called moderate drinking is not the rule among the Brazilian population. Generally, almost half of the population is abstinent (Laranjeira et al., 2010). On the other hand, among those who consume alcoholic beverages, almost one quarter has problems and consumes potentially harmful quantities (Caetano et al., 2011; Laranjeira et al., 2010).

In Brazil, like in many emergent economies, there is a high availability of alcohol due to a large number of alcohol outlets and unregulated hours of sales. In addition, alcoholic beverages are extremely cheap to purchase and national laws to prevent the under aged from buying alcohol are rarely enforced. Moreover, research has also identified a range of factors that interplay in this current Brazilian context that can facilitate unhealthy patterns of alcohol consumption. Studies show, for example, important differences in alcohol consumption, quantity, frequency, related problems and types of alcoholic beverages consumed in the country according to socio-demographic characteristics. Examples include: (a) abusive alcohol consumption is lower in the highest education and lowest income segments (Barros et al., 2007), (b) not having a religion substantially increased the likelihood of alcohol misuse (Barros et al., 2007), and (c) among men, alcohol consumption is more frequently associated with those who are single and young (18 to 25 years old), and the quantities



consumed are higher and associated with more problems (Laranjeira et al., 2010).

Other popular substances used in Brazil are tobacco, inhalants/solvents, hallucinogens, and medications for non-physical reasons (e.g. anxiolytics and anorexigens) (Bastos 2008; Galduróz et al., 2005). However, by comparing rates of lifetime use with other countries (e.g. US, Chile, UK), these substances seem to be used less frequently in Brazil (Galduróz et al., 2005). The use of ecstasy has also gained visibility in recent years, which is directly associated with night clubs and rave parties where electronic music plays. In an ethnographic study conducted by Battisti et al. (2006) in the city of Sao Paulo, it was shown that ecstasy users come from a young adult population of the highest social classes of the Brazilian society, with a good educational background and access to the labour market.

With regard to substance use among the young population, Madruga et al. (2012) found a high prevalence of alcohol use among adolescents (14 to 19 years of age), in which alcohol users comprised more than half of their sample ( $n=710$ ). In addition, age seemed to influence alcohol and illegal substance use in different ways: getting older increases the likelihood of having alcohol use disorders and decreases the likelihood of using illegal substances. In this same study, Madruga et al. (2012) also found that depressed adolescents were twice as likely to have alcohol use disorders, whilst those young Brazilians that experienced some type of adverse event in early life, such as domestic violence, were over five times more likely to end up using illegal substances and tobacco.

Due to the heterogeneity of the Brazilian population and the territorial vastness, differences in consumption rates between the regions have also been reported. For example, adolescents from the Southern areas of Brazil have been reported to

consume alcoholic beverages more frequently than those adolescents from Northern and Central-Western regions (Pinsky et al., 2010). The percentage of the population in the Northern areas that are binge drinkers increased by nearly 30% from the period of 2006 to 2012, whereas in the Southern areas no significant changes were found during that six-year period (Brazilian National Alcohol and Drugs Survey, 2012). With regard to cocaine use in Brazil, the Southern region presented significantly lower rates than the country's overall prevalence (Abdalla et al., 2014).

As presented, Brazil today faces new challenges to deal with changes in substance use patterns. It seems that the overwhelming social and economic changes that happened in the country in the last decade, coupled with the poorly enforced control of drug trafficking and a number of established risk taking tendencies, have turned the issues involving substance use into an even more complex problem across the country. That being said, recognising the contextual influence of such factors in the life course of those Brazilians living in the UK is crucial, as these factors might augment the complexity in which the acculturative process affects substance use behaviours.

### **2.5 FINAL COMMENTS**

This chapter began by examining the historical contexts that shaped the migratory movement to the UK. Since the late 1990s, Britain experienced a remarkable increase in net migration and a significant change in its population characteristics. Immigrants today are more numerous, more mobile, and more diverse than previously experienced. The experience of migration is different: immigrants are coming from a broader array of countries and for a greater variety of political, social, environmental and personal reasons. As a result, emergent demographic and social patterns arose in

British society and the questions about the economic and social consequences of immigration are still being debated. In parallel, UK immigration policy has undergone radical changes with the objective of reaching a sustainable net migration. It is within this context of economic and political ambiguity about the pros and cons of migration, coupled with the multiplicity of new factors that interplay in this movement that places Britain in a challenging position to deal with its pluralistic society.

As presented, the nature of migration to Britain has brought with it a transformative 'diversification in diversity' in the last two decades, with a multiplicity of significant variables that affects where, how and with whom people live. However, despite seismic cultural shifts, the majority of psychological research in the field of migration and ethnicity remains mostly descriptive rather than prescriptive. As a result, there is an absence of information on how the combinations of such variables arising through the migratory process, are affecting individuals' lives. The present chapter brings to light the point that such absence of information has been, in part, responsible for leaving immigrants and members of minority ethnic groups among the vulnerable populations exposed to a series of risky behaviours. This is particularly noticeable among ethnic communities like the Brazilians in the UK, which despite a salient presence in the cultural, social and economic scenarios in Britain, remain largely invisible to the views of policy makers and scholars.

Based on evidence from the few reports conducted with the Brazilian community in the UK, information was compiled in this chapter that suggests that the Brazilian community has robust similarities to other new ethnic communities in Britain with regards to its diverse nature. Examples of this diversity include the number of reasons that motivated Brazilians to come to the UK, the fact that the community is

scattered across the country and composed of socio-economically differentiated groups, and with legally stratified immigrants who might stay temporarily or might stay permanently.

In parallel, Brazilians in the UK, like members of many other minority ethnic groups are showing signs that the use of alcohol and other drugs is becoming problematic within the communities. Because there is no research-based work published in Britain about Brazilian immigrants' alcohol and drugs consumption, and very little is known about the aetiology of substance use in the new ethnic groups, the current research begins to explore the problematic use of alcohol and other drugs amongst the Brazilians in the UK by following the theories, findings, and discussion from previous studies that have investigated this problem within ethnic communities.

In general, scholars generally agree that there are several contextual factors influencing immigrants and members of ethnic groups to use alcohol and other substances. Not much is known, however, about the extent to which these factors influence immigrants and how acculturative changes are influencing substance use in immigrants and members of minority ethnic groups. In addition, given that the majority of research had explored the impact of cultural changes by applying a simplistic and unidimensional model of acculturation, there is a large gap in the current literature about the dynamics that underlie the association between the migratory experiences and substance use.

Thus, given that very little research has actually explored such dynamics, this study will attempt to address this gap, and develop a better understanding of the factors which contribute to changes in patterns of alcohol and substance use in immigrants. However, to be able to trace such changes accurately it is also essential to take into

account the current cultural and social context in the country from where these immigrants are coming. By describing the current trends in substance use in Brazil, this Chapter also intended to illustrate potential patterns of substance use that Brazilian immigrants might have due to influences arising from their mainstream culture.

## CHAPTER 3 RESEARCH METHODS

To investigate the research aim, objectives and hypotheses presented in Chapter one, the current study employed a mixed-methods approach and a cross-national design. The details of the research design, participants, measures, and procedures are outlined in this chapter.

### 3.1 DESIGN

The current research is a cross-national study that utilised mixed-methods in a sequential explanatory design to investigate the research objectives indicated in Chapter 1. According to guidelines for using this approach, mixed-methods sequential explanatory designs consist of data collection and analysis using a particular method, followed by examination of the results from this first phase, and then collection and analysis of data using a different method (Clark, 2010). Therefore, the second phase depends on components of the first phase and the final integration relies on the concise findings from both data types. From this perspective, a mixed-methods approach strengthens the possibility of obtaining a more comprehensive understanding of the research questions as it offers an interactive process between deduction and induction. As a result, the process of combining quantitative and qualitative methods in this interactive approach eliminates the methodological weaknesses associated with each of these methods when applied separately (Solsuski & Lawrance, 2008).

In the present research, quantitative data collection and analysis of questionnaires were carried out first, followed by qualitative data collection to explore in more depth patterns observed in the quantitative data. Both parts of the data collection took place

with a sample of Brazilians residing in the UK and a sample of Brazilians residing in Brazil.

The quantitative study comprised of a pack of questionnaires which included: individual demographic variables, personality characteristics, resilience, drinking motives, and in the case of Brazilian participants in the UK, acculturation status and acculturative stress. Outcome variables included measures of alcohol and substance use. The quantitative data were entered into SPSS version 19 and analysed using a range of quantitative statistical procedures discussed in Chapters 4 and 5, including, among others, factorial analysis of variance, multi-groups analysis and logistic regression.

The qualitative element of this research sought to explore complex issues related to social, cultural, and psychological factors that underlie the susceptibility of Brazilian immigrants to use alcohol and other substances. The intention was to gather data that would either support or challenge the quantitative findings, as well as allow elaboration of these findings with regard to how acculturative processes impact on patterns of alcohol and substance use. A subgroup of participants selected from both samples (Brazilian residents in the UK and Brazilian residents in Brazil) on the basis of profiles emerging from the quantitative assessment, were invited to take part in semi-structured interviews focusing largely on perceptions of their social, physical and cultural worlds. Further, acculturation needs to be understood as a process or in dimensional terms, and not merely as a present or absent phenomenon. In this qualitative study, an in-depth examination of the acculturation process, including an analysis of immigrants' perceptions of cultural and psychological changes resulting from this process, was carried out. Additionally, a small focus group session was also carried out as part of the qualitative data collection. Thematic Analysis (TA) was

selected as the method for analysing the data that emerged from this qualitative phase.

Findings from this phase are presented in the form of themes in Chapter 6. The

integration of quantitative and qualitative findings is discussed in Chapter 7. A visual

model of the mixed-methods sequential explanatory design employed in the current

study is illustrated in Figure 3.1

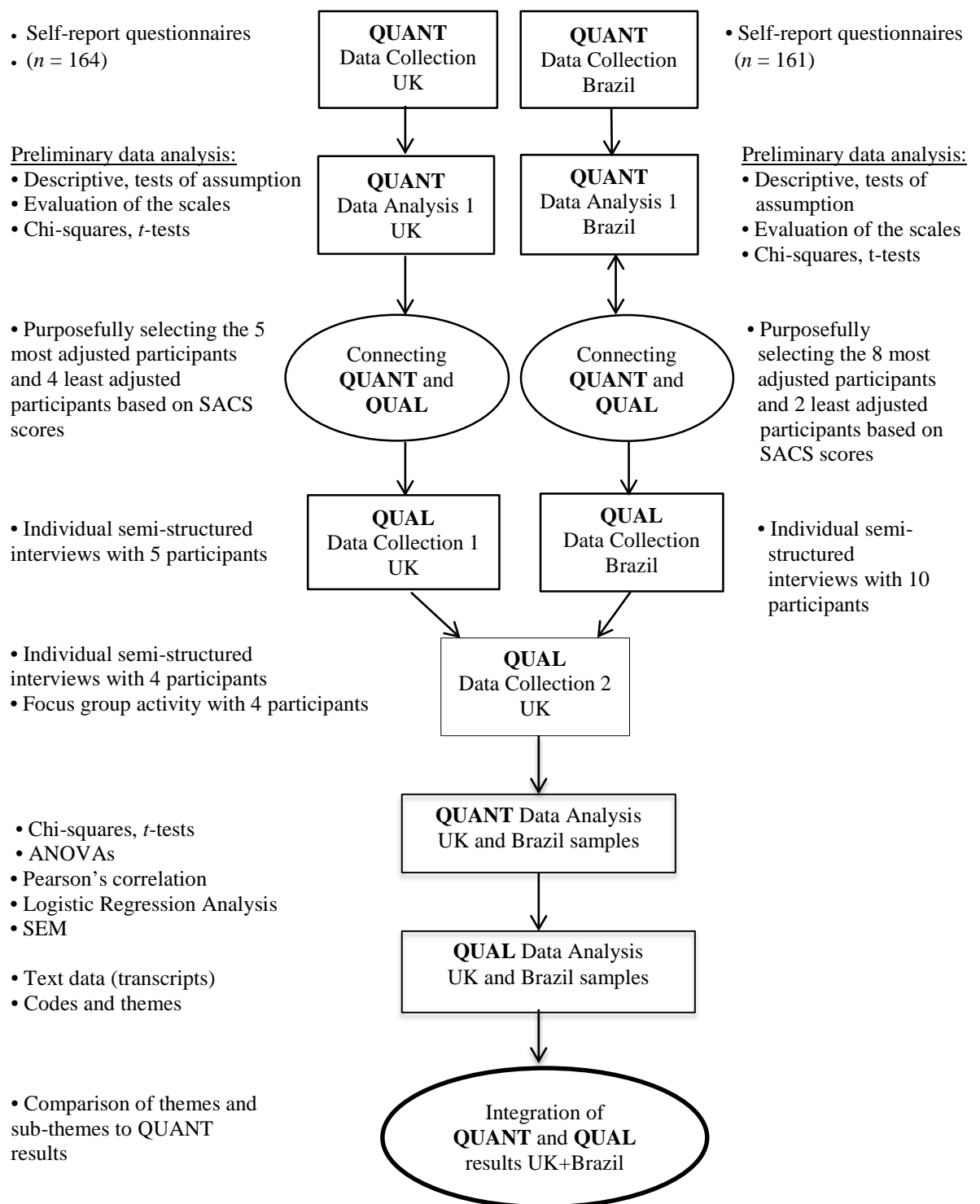


Figure 3.1 A visual model of mixed-methods sequential explanatory design employed in the Current study



### 3.2 PARTICIPANTS

All participants were required to be over 18 years old. For Brazilians in the UK, participants were required to be the first generation of immigrants and to have been born and raised in Brazil. For Brazilians residing in Brazil, the criteria for participation also included only participants who had not resided in another country outside of Brazil in the past (i.e. stayed in another country for more than six months).

#### 3.2.1 Brazilians Residing in the UK

The sample of Brazilian immigrants in the UK comprised of 164 participants (90 females and 74 males). The majority of participants were in the group range of 26 to 32 years of age (44.90%), with a mean age of 28.75 ( $SD = 5.90$ ). The mean age for female Brazilian immigrants was 28.09 ( $SD = 5.91$ ) and for males was 29.55 ( $SD = 5.82$ ). Table 3.1 illustrates the age groups and gender of Brazilian immigrants in the UK sample.

Table 3.1: *Percent of Brazilian Immigrants in the UK Sample According to Age and Gender Groups (in %)*

Age Range	Female	Male	Total
18-25	18.89	8.89	32.10
26-33	27.78	2.22	46.70
34 and over	18.89	23.33	21.20

A total of nine participants were selected through extreme case purposive sampling (Teddlie & Yu, 2007) for the qualitative phase of this study, based upon their scores on the Substances and Choices Scale (SACS). From this group, six participants were

selected who indicated high alcohol and substance use (i.e. those who indicated use of one or more substances almost every day of the week during the last month), three were selected who indicated low alcohol and substance use (i.e. those who indicated they had never, or only once, used alcohol or other substances during the weeks of the last month). It was expected that interviews with participants that were highly vulnerable to alcohol and substance misuse and least vulnerable, would yield qualitative data that might provide a rich view of alcohol and substance misuse development. Table 3.2 provides a summary of their demographic characteristics.

*Table 3.2: Demographic Characteristics of Participants from the Qualitative Phase*

Participant*	Classification	Substance(s)** of Preference	Gender	Age Range
Douglas	Substance User	Alcohol, Cannabis, Halluc, Recrea.	Male	18 – 25
Julio	Substance User	Alcohol, Cannabis, Cocaine, Recrea.	Male	26 – 33
Ivo	Substance User	Alcohol, Cannabis, Cocaine, Recrea.	Male	34 and over
Carla	Binge drinker	Alcohol	Female	18 - 25
Patricia	Substance User	Alcohol, Cannabis	Female	26- 33
Michael	Substance user	Alcohol, Cannabis, Cocaine, Recrea	Male	26 - 33
Luisa	Non-substance misuser	-	Female	18 - 25
Patrick	Non-substance misuser	-	Male	26 - 33
Eduardo	Non-substance misuser	-	Male	34 and over

*Note.* \* pseudonym is applied. \*\*Halluc = Hallucinogens; Recrea=Recreational Drugs (e.g. MDMA, ecstasy, mephedrone)

The total sample comprised of participants originating from the five geographic regions of Brazil: North, North East, Central West, South East, and South. The majority of participants came from the South East region (57%) followed by Central West (29.7%) and South (24.8%) regions. Only a small proportion of the sample

came from the North East (5.5%) and North (3%) areas. Further, the sample was dominated by participants who came from large cities in Brazil (68%) (cities with populations over 400,000).

With respect to length of residence in the UK, the mean was 6.47 years ( $SD = 4.39$ ). At the time when the data were collected in 2013, 79.4% of the sample had migrated to the UK from the year of 2003 onwards. Further, the largest part of the sample indicated that they had never lived in another country other than Brazil and the UK (61%). Table 3.3 illustrates the gender and mean ages of Brazilian immigrants according to years of residence in the UK.

Table 3.3: *Years of Residence According to Age Means/Standard Deviation and Gender (in %) Of Brazilian Immigrants in the UK*

<b>Residence Year Ranges</b>	<b>Age Means (SD)</b>	<b>Female (%)</b>	<b>Male (%)</b>	<b>Total (%)</b>
1-4	26.42 (5.34)	58.3	40.0	35.8
5-9	28.68 (5.49)	56.9	43.1	43.6
10-14	32.14 (5.22)	36.4	63.6	13.3
15 and over	34.70 (6.00)	50.0	50.0	6.1

### 3.2.2 Brazilians Residing in Brazil

In Brazil, the sample comprised of 161 participants (103 females and 57 males). Similar to the sample of Brazilians in the UK, the majority of participants were in their late 20s with a mean age of 26.93 ( $SD = 5.65$ ). The mean age for female participants in Brazil was 26.83 ( $SD = 5.91$ ) and for males was 27.25 ( $SD = 5.95$ ). Table 3.4 illustrates the age groups and gender of participants in Brazil.

Table 3.4: *Percent of Brazilian in Brazil Sample According to Age and Gender Groups (in %)*

<b>Age</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
18-25	68.2	31.8	44.10
26-33	62.9	37.1	36.00
34 and over	63.3	18.6	19.90

The extreme case purposive sampling approach (Teddlie & Yu, 2007) was also carried out in the Brazilian sample in Brazil. Based upon their scores on the Substances and Choices Scale (SACS), ten participants were selected for the qualitative phase of this study. From this sample, eight participants were selected who indicated a high quantity of alcohol and substance use, two were selected who indicated low alcohol and substance use. As with the sample in the UK, interviews with participants highly vulnerable to alcohol and substance misuse, and participants that were least vulnerable, were thought to yield qualitative data that might provide a rich view of alcohol and substance misuse development in Brazil. Table 3.4 provides a summary of the key characteristics of the qualitative sample in Brazil.

Table 3.5: *Demographic Characteristics of Participants from Qualitative Phase*

Participant*	Classification	Substance(s)** of preference	Gender	Age Range
Gustavo	Substance User	Alcohol, Cannabis, Cocaine,	Male	18-25
Daniel	Substance User	Alcohol, Cannabis, Cocaine,	Male	26-33
Bianca	Substance User	Cigarettes, cannabis	Female	26-33
Ricardo	Substance User	Alcohol, cannabis Cannabis	Male	26-33
Lais	Substance User	Cannabis	Female	26-33
Mario	Substance User	Cannabis	Male	18-25
Pietro	Substance User	Alcohol, Cocaine	Male	26-33
Alan	Substance User	Alcohol, Cocaine	Male	26-33
Gabriela	Non-substance User	-	Female	18-25
Lucio	Non-substance Use	-	Male	33 and over

*Note.* \* pseudonym is applied. \*\*Halluc = Hallucinogens; Recrea=Recreational Drugs (e.g. MDMA, ecstasy, mephedrone)

The data collection in Brazil took place in the city of Porto Alegre in the South area of the country. As the Greater Porto Alegre is one of the biggest metropolitan cities in Brazil, with 4,405,760 inhabitants (Instituto Brasileiro de Geografia e Estatística, 2010), it was expected that the population would be diverse in relation to participants' areas of origin. From the five geographic areas of Brazil, only the North area wasn't represented in this sample. The majority of the participants came from the South area (87%) with few representations from South East (6.2%), Central West (4.3%), and North East (2.5%) areas. Similar to the sample in the UK, the majority of the participants were originally from large cities in Brazil (70.6%) (cities with populations over 400,000).

As indicated in this section, both samples were reasonably equivalent in respect of demographic characteristics. However, attention needs to be taken when interpreting some of the findings in the following chapters with respect to gender. Contrary to the sample in the UK, the sample in Brazil was not equally distributed in the number of female and male participants (103 females and 57 males). Caution is therefore needed, especially when comparing the odds of illicit drug use across countries. Although the gap in illicit drug use between males and females is narrowing in most western countries, gender still appears to be an important variable affecting patterns of substance use, age of initiation, and risk factors (Nolen-Hoeksema & Hilt, 2006). A wide range of studies, for example, show that generally men have a preference for using illicit drugs such as cannabis, opioids, and cocaine, whereas women more often use stimulants and pharmaceutical drugs. Specifically, older women were found to be more likely to use and abuse prescribed psychoactive drugs (Cormier et al., 2004) while male school 15 to 16 year old students were three times more likely to be frequent cannabis users than female students (European Monitoring Centre for Drugs and Drug Addiction, 2006). Thus, to sustain the comparability of both samples, the unequal gender distribution in the sample in Brazil was analysed with caution when comparing quantitative data across country samples in Chapter 5.

### **3.3 QUESTIONNAIRES**

In this section, the questionnaires used in the quantitative stage of this study, along with explanations for their application, are described. All the questionnaires were selected through literature searching and the administration of the questionnaire

pack was firstly conducted in English and then translated into Brazilian Portuguese. Two versions of the questionnaire pack were made available to participants, an online version and a print version, and it was self-administered in both versions (see Appendix 2 for the English version).

The questionnaire pack administered in Brazil was slightly shorter than the one administered in the UK. This is because two questionnaires related to the experience of living in the UK - Acculturation, Habits, and Interests Multicultural Scale for Adolescents (Unger et al. 2002) and Multidimensional Acculturative Stress Scale (Jibeen and Khalid, 2010) – as well as a single question on the sociodemographic questionnaire about years of residence in the UK, which were all excluded from the questionnaire pack in Brazil.

The reliability of all the questionnaires according to this research data set is explored in Chapter 4. The psychometric properties of the five questionnaires that were translated to Brazilian Portuguese for the purposes of this research are also explored in Chapter 4.

### **3.3.1 Socio-Demographic Questionnaire**

In this section, participants' age, gender, level of education, socioeconomic status (measured by participants' occupation and participants' parents' occupation) and household size has been recorded. Participants also had to indicate which place in Brazil they come from, and for Brazilians residing in the UK, the length of residence (in years) in the UK. Participants were also asked if they belonged to a religious group, and how often they attended the religious centre.

Through socio-demographic information, it was possible to compare both samples (UK and Brazil) in terms of such categories as age, gender, social class, and religiosity. Thus, by exploring these variables it was possible to confirm whether both samples were similar in composition and, most importantly, it offered a form of exploring heterogenic characteristics of each sample (Almeida & Grzywacz, 2008; Benjet, 2007; Castro et al., 2012).

### **3.3.2 The Substances and Choices Scale (SACS: Christie et al., 2007)**

The SACS is a brief instrument comprising 23-items designed in two sections. The first section consists of a table that quantifies the number of days in which a person has used a variety of substances in the last month (i.e. alcohol, cannabis, cocaine, sedatives). The aim of this section is to monitor frequency and range of substance use. The second section (SACS-Difficulties Scale) consists of four items exploring the context of alcohol and substance use and six items exploring behavioural indicators of serious consequences of use or harm. Participants are asked to answer - 'definitely true', 'somewhat true' or 'not true' – to statements like 'I've thought I might be hooked or addicted to alcohol or drugs', 'My alcohol or drug use has led to arguments with the people I live with', 'I've wanted to cut down on the amount of alcohol and drugs that I am using'.

Thus, while the first section of SACS is used as a screening instrument to measure the frequency with participants are using a range of substances, the second section was applied in this study to help with identifying possible difficulties and troubles that the research participants might be experiencing due to their substance use. In addition, by applying this second section of SACS, the current study hoped to



encourage participants to reflect about actions arising from their alcohol and drug intake, which in turn might contribute to them developing a state of awareness about their habits. Lastly, by measuring potential harm and consequences of substance use in the study, it yields complementary information about whether there is a difference in how participants perceive the outcomes of their alcohol and drug use across both countries.

### **3.3.3 Quantity of Alcohol Consumption**

A question related to the specific quantity of alcohol that is usually consumed by the participants when going out, was added to the questionnaire. In this question, participants were asked to write down the number of drinks consumed by using a table containing pictures of what is considered one drink (i.e. one drink = one glass of wine or one pint beer).

The reason for asking participants to indicate number of drinks rather than alcohol units (which is widely used in alcohol research in the UK) is due to the objective of gaining information that only reflects quantity of alcohol consumed per episode rather than information about whether the participants hold knowledge about sensible limits for drinking alcohol. More precisely, the central aim of this question is to gather information about whether participants tend to binge drink.

It is also important to note that in Brazil today there is a lack of consensus about what is considered a 'safe' or 'low-risk' standard for alcohol consumption. Unlike in the UK, in Brazil there are no official guidelines of recommended alcohol units available to the public. It would therefore be inappropriate to assume that the

British standard alcohol recommendation guidelines can be replicated in Brazil without a full and in-depth empirical investigation of this assumption. In addition, reports show that there is a considerable inconsistency in the actual levels of alcohol that are considered “safe” or “low-risk” across countries (Institute of Alcohol Studies, 2013). Several possible reasons, both historical and cultural, underlie this discrepancy. In some countries like Portugal, for example, beverage-specific recommendations and definition of ‘standard’ units were developed based on wine consumption, only due to the high popularity of wine in the country. In Romania on the other hand, ‘standard’ levels of alcohol consumption is based on whether the beverage happens to be beer or wine (International Center for Alcohol Policies, 2003).

Hence, the present study does not follow any country’s official standard recommendation guidelines for alcohol consumption. With respect to binge drinking, however, those male participants who indicated that they consume five or more drinks on a night out were identified as binge drinkers. Female participant’s binge drinkers were identified by the indication of consuming four or more drinks in a night out. This classification was selected in this study based on methodological similarities to a few studies carried out across UK and Brazil that provide consistent findings using this classification (e.g. Castro et al., 2012; Kuntsche et al., 2004; McCarty et al., 2004; Nelson et al., 2004).

### **3.3.4 Drinking Motives Questionnaire Revised – Brazilian Version (DMQ-R: Hauck-Filho, Texeira, & Cooper, 2012)**

Motivation for alcohol use was measured by the DMQ-R Brazilian version of the original Drinking Motives Questionnaire developed by Cooper (1994). The Brazilian version of DMQ-R consists of a 19-item scale assessing four motive dimensions: social, enhancement, coping, and conformity. Validation findings indicate that the factor structure of the Brazilian version of DMQ-R is similar to the original version developed in North America and Europe with an internal consistency of .85 (social motives), .75 (enhancement motives), .79 (coping motives) and .87 (conformity motives). In DMQ-R, participants are asked to rate on a 5 point Likert-type scale (responses ranging from 1 “Almost Never/Never” to 5 “Almost always/always”) the reasons that motivate them to drink alcoholic beverages (i.e. social motives, ‘Because it improves parties and celebrations’; enhancement motives, ‘Because it gives you a pleasant feeling’; coping motives, ‘To forget your worries’; conformity motives, ‘To fit in with a group you like’).

Motives for drinking represent a subjectively derived decisional framework driven mostly by people’s desire to obtain positive outcomes or to avoid negative ones (Cox & Klingler, 1990). The four motives for drinking alcohol measured by DMQ-R are identified across these two dimensions and have so far proved to be associated with particular alcohol related behaviour outcomes. Enhancement and coping motives, for example, have been shown to be associated with heavy drinking and drinking alone (Goldstein and Flett, 2009; Knutsche et al., 2006), and conformity and coping motives have been shown to be associated with alcohol related problems. On the other hand, social motives are associated with relatively light, non-problematic drinking.

### 3.3.5 Resilience Scale (RS-14: Wagnild & Young, 1993)

The 14-item Wagnild and Young Resilience Scale (RS) was selected to assess resilience status. This scale is a short version of the original 25-item Wagnild & Young's (1993) Resilience Scale (RS). The RS-14 has been shown to be an accurate tool for studying resilience in individuals from different age ranges and ethnic groups (Ahern et al., 2006) with strong internal consistency ranging from 0.91 to 0.94. In Brazil, psychometric properties of this scale were examined by Damasio et al. (2011). The authors found that the RS-14 scale has excellent construct validity when translated and applied to the Brazilian population (Cronbach' alpha of .82). Five characteristics of resilience are measured in this scale: self-reliance (i.e. 'I usually manage things one way or another'), meaning (i.e. 'My life has a meaning in life'), equanimity (i.e. 'I usually find something to laugh about'), perseverance (i.e. 'I am determined'), and existential aloneness (i.e. 'My belief in myself gets me through hard times') itself) using a 7-point Likert-type scale (responses ranging from 1 "strongly disagree" to 7 "strongly agree"). Overall scores range from 14 to 98. A score greater than 90 indicates high resilience, a score of 61 to 89 indicates moderately low to moderate resilience, and a score below 60 indicates low resilience.

Resilience, the ability to positively adapt in individuals despite experiences of significant adversity, has been widely identified as both a protective factor (high level of resilience) and a risk factor (low level of resilience) for alcohol and substance use (Johnson et al., 1998; Meschke & Patterson, 2003; Wong et al., 2005). It is unclear, however, whether the difficulties related to moving and adapting to another culture have an effect on levels of resilience. Consequently, research on

resilience as a protective or risk factor for alcohol and substance use in immigrants is scarce. The present study aimed to close this gap in the literature by comparing levels of resilience between Brazilian immigrants and non-immigrants, as well as to explore the relation of other psychological factors on the predisposition to have high or low resilience.

### **3.3.6 The Substance Use Risk Profile Scale (SURPS: Conrod & Woicik, 2002)**

The SURPS is a 23-item scale based on a model of personality risk for substance abuse, in which four personality dimensions (hopelessness, anxiety sensitivity, impulsivity, and sensation seeking) are hypothesised to differentially relate to specific patterns of substance use. Participants are asked to report whether they agree or disagree with statements such as “I am content”, “It’s frightening to feel dizzy” and “I feel that I’m a failure” using a 4 point Likert-type scale (from 1 “strongly disagree” to 4 “strongly agree”). A higher score reflects a greater likelihood of the presence of that particular personality factor. The SURPS has demonstrated good psychometric properties with internal consistency of .65 for the anxiety sensitivity subscale, .76 for the hopelessness subscale, .62 for the sensation seeking subscale, and .61 for the impulsivity subscale (Woicik et al., 2009). The link between personality traits and problematic use of alcohol and other drugs has been extensively researched, and personality has been indicated to be useful in understanding individual differences in the susceptibility to substance use disorders (Cloninger, 1987; Conrod et al., 2000; Gotham, Sher, & Wood, 1997; Wolft & Wolft, 2002;). It is therefore an important factor in predicting the development of

substance use disorders in those individuals prone to that (Hopley & Brunelle, 2012; Lejuez et al., 2006; Krueger et al., 2007).

### **3.3.7 The Positive and Negative Affect Schedule (PANAS: Watson et al., 1988)**

The PANAS consists of two mood scales (10-items each) and was developed to provide brief measures for Positive Affect (PA) and Negative Affect (NA). Both PA and NA reflect dispositional dimensions, with high NA characterised by subjective distress and unpleasurable engagement, and low NA by the absence of these feelings. Yet, PA represents the extent to which an individual experiences pleasurable engagement with the environment. Thus, emotions such as enthusiasm and alertness are indicative of high PA, whilst lethargy and sadness characterise high NA. Participants are asked to rate the extent to which they have experienced each particular emotion within a specific time period using a 5-point Likert-type scale (from 1 “very slightly or not at all” to 5 “very much”). Both the positive and negative affect scales have been shown to be reliable, with alpha coefficients of .89 and .87, respectively (Watson et al., 1988). A number of different time-frames have been used with the PANAS, in the current study the time-frame adopted was “in the last month” as it is usually used as a time-frame in alcohol and drug self-assessments.

A few studies have shown a direct link between positive and negative affect measured by the PANAS and patterns of alcohol and substance use (Caldwell et al., 2002; De Castro et al., 2007; Winefield et al., 1993). In particular, studies have shown that negative affect in substance misusing populations is identified as a frequent reason for drug and alcohol use treatment relapse (Cooney et al., 1997;

Maude-Griffin & Tiffany 1996; Sinha et al. 2001). Studies have also shown that NA is associated with males' greater desire for alcohol when alcohol cues are presented (Greeley et al., 1992), and high alcohol craving following treatment (Litt et al., 2000). In the field of acculturation research, positive and negative affect has been identified as a mental health indicator (Cladwell et al., 2002), although there is a lack of consensus about the relation between acculturation outcomes and mental health. Based on these empirical findings, the present research hoped to provide a better understanding of how the two dispositional dimensions measured by PANAS are related to alcohol and substance misuse within the context of acculturation.

### **3.3.8 Acculturation, Habits, and Interests Multicultural Scale for Adolescents (AHIMSA, Unger et al. 2002)**

The AHIMSA is an 8-item scale developed to measure Berry's fourfold model of acculturation – integration, assimilation, separation and marginalisation. Based on this, respondents are asked to categorise their cultural preference in eight domains “I am most comfortable being with people from ...,” “My best friends are from ...,” “The people I fit in with best are from ...,” “My favorite music is from ...,” “My favorite TV shows are from ...,” “The holidays I celebrate are from ...,” “The food I eat at home is from ...,” and “The way I do things and the way I think about things are from ...”. Each domain can be answered, “UK,” “Brazil,” “Both countries,” or “Neither countries”. The number of “UK” responses indicates Assimilation (British orientation). The number of “Brazil” responses indicates Separation (Brazilian orientation). The number of “Both countries” responses indicates Integration. The number of “Neither” responses indicates Marginalisation. In the original study

developed by Unger et al. (2002), internal consistency analysis indicated Cronbach's alphas of .76 for the assimilation subscale, .76 for the separation orientation subscale, .74 for the integration subscale, and .50 for marginalisation.

The AHMSA was selected in the current research because of its brevity and multicultural relevance. Additionally, due to its multi-dimensional pattern of assessing multiple components of acculturation other than language, the application of AHMSA provides a more comprehensive acculturation measure. Previous studies that applied the four acculturative strategies measured by AHMSA (integration, assimilation, separation, and marginalisation) to study patterns of alcohol and substance use among members of minority ethnic groups indicated concise associations between variables. However, also noticeable are the convergent findings across studies with respect to precise outcomes of acculturation and patterns of alcohol and drug use. De la Rosa (2002), for example, showed that greater integration among adolescent Latinos in North America has been linked to more substance abuse. Yet, in a study in the Netherlands, Dotinga and colleagues (2006) found higher drinking rates among Turks and Moroccans who did not feel accepted into Dutch society, than in those who were integrated and living there for a longer period of time. Berry (1997) claimed that integration is usually the most beneficial strategy to adaptation, while marginalisation is the least beneficial, and assimilation and separation are intermediate. Nevertheless, as can be seen in De la Rosa's study, there are also less favourable views toward integration. Other studies also revealed that assimilation or separation have more or similarly favourable associations with mental health compared with integration (Choi, Miller & Wilber, 2009; Jasinskaja-Laht et al., 2003; Neto, Barros & Schmitz, 2005). These controversial findings illustrate the complexity of acculturation and the importance



of exploring other factors that interplay in the context of immigration to a particular country. It seems plausible to argue in this way that to understand fully the outcomes of this process, it is essential to take into consideration multiple factors that are involved in the construction of acculturative strategies.

### **3.3.9 Multidimensional Acculturative Stress Scale (MASS: Jibeen & Khalid, 2010)**

The multidimensional acculturative stress scale (MASS) was developed originally to capture the unique stressors in different life domains faced by Pakistani adult immigrants residing in Canada. Although the MASS was developed to measure specific acculturative stress among Pakistanis, this scale was selected for the present study because it measures multiple factors associated with acculturative stress that have not been combined in any other single measure to date. In the current study therefore, Canada has been changed to Britain, and instead of Pakistani identification, Brazilian identification has been substituted. The original version of MASS comprises 24 items, but for this study item 8 (I worry that my children/next generation will become very broad minded) was excluded during the back translation process as this item tended to apply mostly to Islamic culture rather than Brazilian culture. The 23-item MASS measures five distinct factors including discrimination, threat to ethnic identity, lack of opportunities for occupational and financial mobility, homesickness, and language barriers. Each item is rated on a 4-point Likert-type scale that ranges from 1 (*Disagree*) to 4 (*Agree*). A higher score reflects a greater likelihood of the presence of a particular domain of acculturative stress. The Cronbach's alpha coefficient for the total scale is .89 and for

the subscales it ranges from .82, .77, .87, .56 and .64, respectively (Jibeen & Khalid, 2010).

Acculturative stress has received greater attention in the field of alcohol and substance use and ethnicity studies as it has successfully been shown to be related to a few health outcomes. The explanation behind the majority of the findings that explored acculturation and health outcomes, lies on the assumption that acculturation is a stressful process whereby individuals might adopt particular behaviours as a means of coping with this stress. The effects of this stress have been hypothesised to be most intense in those individuals who are partially disengaged from their native culture but who have not yet fully integrated into the host culture. Through measurement of acculturative stress in the Brazilian sample in the UK, it was possible to get a sense of how these immigrants feel to be in the UK, how they think British society views them, and what they perceive to be the main barriers to living well in the UK.

### **3.4 INTERVIEWS AND FOCUS GROUP**

Semi-structured interviews with open-ended questions were conducted between April 2012 and February 2013. The main aim of the semi-structured interviews was to explore in-depth complex issues related to social and cultural factors that underlie the susceptibility of Brazilian immigrants to use alcohol and other drugs by adopting a less structured approach. The intention was to gather data that would either support or challenge the quantitative findings, as well as allowing elaboration of these findings with regard to how acculturative processes impact on patterns of alcohol and substance use. Further, this approach aimed to enable questions to be

tailored based on what emerged from the quantitative data analysis, with a more readily representative participants' view. Hence, the interviews sought to explore the impact that the migratory process to the UK has on Brazilian immigrants' alcohol and substance use, by looking for a variety and divergence of responses, rather than replicable and convergent ones.

In the UK, interviews had four main focus areas: how participants' lives in Brazil were prior to moving to the UK, motivational factors in choosing to come to the UK, the experience of migrating to the UK, and patterns of alcohol and substance use. Ten core questions, including some prompt questions, were constructed prior to the interview. The objective of these questions was to assist the researcher in focusing on the four key areas of this research phase, while also allowing participants room to provide rich responses. Examples of core questions include: Could you please tell me about how your life in Brazil was? In what job did you work and who were your friends in Brazil? What was your perception of Britain before coming here? What are the things you like about the UK? How do you feel about the migratory journey? Do you feel that you have changed since coming to the UK? If yes, in what way? Can you tell me about the role that alcohol and/or drugs play in your life? Is there any particular feeling or sensation that encourages you to drink or take drugs? Do you have a substance misusing relative in your family? Has your alcohol and drug intake increased since moving to the UK? Do you think there is a difference in how people in Brazil and people in the UK perceive alcohol and other drugs?

In Brazil, interviews were focused on two main areas. The first area concerned general aspects of the participants' lives including what they do for a living, who their friends are, what they do to socialise with others, etc. The second focus area

enquired about habits, experiences, and expectations related to alcohol and other substance use. Participants had to comment, for example, on which kind of feeling or sensation they expect from consuming alcohol or other drugs, when they started to consume alcohol and/or other drugs, and if they grew up with parents misusing alcohol or other drugs.

The interviews were carried out in three stages. The first stage, which was followed by a preliminary analysis of the quantitative data of the UK sample, consisted of five interviews in the UK. After this stage, data collection took place in Brazil, where interviews were undertaken concurrently with the quantitative data collection and analysis. After completion of both quantitative and qualitative data collection in Brazil, the remaining four interviews in the UK were conducted. This approach was adopted for two reasons. Firstly, it provided an opportunity for the researcher to learn from the interviews. This allowed the researcher to correct tendencies to follow preconceived notions about what is happening in the field, which may contribute to them dismissing their own potential influences on the outcome of the qualitative research. The adoption of this approach was particularly important to the current research due to the researcher also being a Brazilian immigrant.

Therefore, the likelihood of researcher and participants sharing similar cultural patterns and experiences was high. The other reason for conducting the interviews in stages refers to the possibility of looking for ideas through studying the data and then returning to the field and gathering further focused data to answer analytical questions and to fill conceptual gaps. By conducting some interviews in the UK, firstly, it allowed the researcher to get an overall idea of the issues. This first stage provided some further guidelines on how to explore the perception, habits, and expectations that Brazilians in Brazil hold with regard to alcohol and other drugs in

more depth. As a result, a greater amount of attention was given in the four final interviews in the UK to particular differences and possible changes in patterns of alcohol and substance use between Brazilians residing in Brazil and Brazilians residing in the UK.

In addition to the interviews in the UK, a focus group session was carried out with four participants. The aim of this activity was to provide information regarding the process of adapting to the UK, including initial barriers and cultural pressures that the participants were facing at the time. The idea behind the reason for combining the focus group to the qualitative data collection in this study is that by encouraging participants to talk to one another, asking questions, exchanging narratives, and commenting on each other's experiences and points of view, this could aid participants in exploring and clarifying their opinions (Kitzinger, 1995; Krueger & Casey, 2000). This makes focus groups a data collection technique particularly sensitive to cultural variables as it provides a great opportunity for participants to express themselves using their own language, slang, jokes, and expressions. Moreover, focus groups tend to facilitate participants to express their critical comments easier than in interviews (Kitzinger, 1995). All four participants had been living in the UK for six months at the time of the activity and shared similar characteristics, as they all came to the UK in the same way and for the same purpose (as part of a one year exchange study programme at the University of Roehampton). Therefore, the group was highly homogenous in characteristics, meaning that a great level of communication and interaction among group members was easily reached.

Thematic Analysis (TA) (Braun & Clarke, 2006) was adopted to analyse the data originating from the interviews and focus group activity. A detailed explanation of the analytical plan designed to analyse the qualitative data of this study, is described in Chapter 6, Subsection 6.1. The step-by-step process of thematic analysis is also presented in that Chapter (Subsection 6.2). Findings emerging from the thematic analysis are also presented at Chapter 6 and the association with results from the quantitative data is discussed in Chapter 7.

### **3.5 TRANSLATION PROCEDURE**

As illustrated in section 3.3, the questionnaire pack was firstly developed in English and then translated into Brazilian Portuguese. For the questionnaires that had not been validated in the Brazilian Portuguese language prior to this research (SACS-DS, SURPS, PANAS, AHIMSA, MASS), translation was conducted using a back-translation process. Detailed information about the translation and back-translation process is described in the following Chapter 4, Subsection 4.1.2.

For the interviews, participants living in the UK had the option to choose the language in which they would prefer to be interviewed (Portuguese or English) and eventually all interviews were conducted in Portuguese (in Brazil and in the UK). The focus group session was also conducted in Portuguese. For the analysis of the qualitative data, the first stage of the data coding process was carried out in the original language of the respondent (Portuguese). It was only in the second part of the data coding, where a more refined cluster of codes led to the development of a codebook, that segments of the data were translated into English. This translation

was conducted by the researcher and revised by a bilingual (Portuguese – English) speaker.

### **3.6 PROCEDURE**

#### **3.6.1 Procedure in the UK**

A large part of the data gathered in the UK took place in an association responsible for giving assistance to Brazilians in the UK: *Casa do Brasil em Londres*. This is a non-profit making association where around 5,000 Brazilian immigrants hold a membership. Members utilise a range of services including: legal advice and psychological counselling, English lessons, social assistance and getting help to search for jobs, accommodation and schools. Because of the variety of services, *Casa do Brasil em Londres* deals with Brazilian migrants from different backgrounds, profiles and interests, which leads to a very diversified and mixed group of members. Also, due to its central location – near to Oxford Circus – this association attracts Brazilians from different areas of London, in particular from districts and boroughs such as Brent, Bayswater and Stockwell which are areas known for having higher concentrations of Brazilians living there (Evans et al., 2010). Hence, by recruiting participants in this Association, it was possible to generate a large representative sample of members of the Brazilian ethnic group in the UK. The researcher obtained full ethical approval to gather data at this association.

Participant recruitment took place by the researcher attending five group meetings and asking members of this organisation (with ages ranging from 18 to 40) whether they would like to take part in the current study. The aims of the research were

verbally explained by the researcher, prior to participants deciding to take part. The choice to take part in this study was therefore completely up to participants, and they had the right to withdraw from the study at any time during the subsequent three months without needing to give a reason. For those who voluntarily agreed in take part, a written informed consent form was provided, followed by the questionnaire pack. A participant debrief document in Portuguese was added at the end of the questionnaire pack for participants to keep with them. The participant debriefs contained information about the research aims, what to do in case the participant would like to withdraw, and contact details of the research team. Further, information on sources of support that participants could independently access in case of concern about their alcohol or substance use, was included in this debrief (i.e. links to external drug and alcohol counselling organisations). An optional additional consent form was also presented at the end of questionnaire pack for those participants who were interested in participating in the interviews. In this form, participants confirmed they were happy for the researcher to contact them in case they were selected, by adding their email address.

Additionally, the link for the online version of the questionnaire was advertised by Brazilian immigrants in UK communities on the social media site 'Facebook' (i.e. Achei Londres, Amor Brasil, Brasileiros em Londres, Brasil London FC, Brazilian Center, PT Londres, Boteco Brasil, Casa Brasil, Associacao de Brasileiros no Reino Unido) and on online group debate spaces frequently used by Brazilians in the UK and by the researcher (i.e. Brazilian Association of Educational Projects in the UK, Brazilian Immigrants Online Forum, Association of Brazilian Research and Postgraduate Student in the UK, Brazilian Migration Research Group in the UK). After clicking on the online link of the survey, participants were presented with a



page containing the consent form. In this form, exactly the same information as on the printed version was presented. Participants agreed to take part in the study by ticking a box that confirmed they understood and agreed with the following statements: (a) I understand the study and agree to take part, (b) I am aware that in case it is my desire to withdraw from this study, I can do it by contacting the research leader, (c) I understand that the information I am providing will be kept strictly confidential and my identity will be protected in any publication, and (d) I confirm I am 18 years old or more. Ticking this box was compulsory to have access to the questionnaire pack. After all questionnaires were completed, the option for participants to add their email address was presented. It was emphasised that only those participants who were interested in participating in the next stage of the study (i.e. the interview) should add their email address. Subsequently, a participant debrief page was presented. This online debrief document contained exactly the same information as that presented in the printed version. Participants had an opportunity to print this page.

As illustrated in Section 3.2, participants who were interviewed were selected through extreme case purposive sampling (Teddlie & Yu, 2007) based upon their scores on the Substances and Choices Scale (SACS: Christie et al., 2007). All the participants for this stage were first contacted by email and some were followed up by phone calls. Initially 23 participants were contacted by email, however only 12 responded. Of the remaining late group, 9 participants agreed to participate in the interviews. Some of the interviews were conducted at Casa do Brasil em Londres and others at the University of Roehampton within 10 months of the original contact with the participant. Participants provided written informed consent and interviews lasted between 45 minutes and one hour. All the interviews were audio recorded.

Participants were given a debrief letter at the end of the interview and invited to ask any questions they had. The interviews were transcribed verbatim by the researcher. Names and other identifiers were obscured to ensure confidentiality.

### **3.6.2 Procedure in Brazil**

The data in Brazil were gathered with the support of the Centro de *Estudos Psicologicos sobre Meninos e Meninas de Rua* (CEP-RUA, Centre of Psychological Studies on Risk Populations) from the *Institute of Psychology of the Universidade Federal do Rio Grande do Sul (UFRGS)*, where the researcher was offered a visiting research position in order to complete this work. During the period at UFRGS, the researcher had the opportunity to collaborate with another researcher who was working on related projects about risk and protective factors in vulnerable populations and so the data for this study was collected in the associations where CEP-RUA was undertaking their research. Additionally, two questionnaire packs were administered to undergraduate psychology students from UFRGS in-class, and 25 questionnaire packs were administered by the researcher in a large company in the city of Porto Alegre (Irradial Radiologia), where the researcher also had established, contacted, and received approval by the company's director. At Irradial Radiologia, participants were recruited from staff during a group meeting at the company. The researcher personally invited the participants and for those who were interested, the questionnaire pack was given. Participants had three days to complete the questionnaires and return them at any time during this period in a locked box.

Exactly as in the UK, the study was verbally explained by the researcher prior to participants deciding whether or not to take part, including information about the right to withdraw from the study at any time during the subsequent three months and without needing to give a reason. For those who voluntarily agreed to take part, a written informed consent form was provided followed by the questionnaire pack. A participant debrief document was added to the end of the questionnaire pack for participants to keep with them, which included information on sources of support in Porto Alegre that participants could independently access in case of any concerns about their alcohol and substance use. An optional additional consent form was also presented at the end of questionnaire pack for those participants who were interested in participating in the interviews.

The online version of the questionnaire pack was also made available in Brazil with the link being advertised on the research centre, CEP-Rua webpage. This online link had the same information and followed the same procedure as the online version of the questionnaire pack administered in the UK.

Interviews in Brazil followed the same procedure as in the UK. From 15 participants that were selected through the extreme case purposive sampling procedure (Teddlie & Yu, 2007), only 10 agreed to participate in this second phase of the study. All the interviews were conducted in the University in Brazil (UFRGS).

### **3.7 ETHICAL CONSIDERATIONS**

For the data gathered in the UK and in Brazil, ethical approval was gained from the University of Roehampton Ethics Committee prior to advertising the study to

participants (Appendix 3). Additionally, ethical approval was also obtained from the Universidade Federal do Rio Grande do Sul to collect data from their students and through the Centre of Psychological Research on Vulnerable Population (CEP-Rua) (Appendix 4).

The ethical procedures in both countries were the same. Prior to completing the questionnaires, participants were asked to sign a consent form to be returned with their questionnaires (Appendix 5). All signed consent forms were stored separately from the questionnaire data in order to help preserve participants' anonymity. Participants were also advised to create an identification number and write it down on the questionnaire pack and on the participant debrief. For participants who signed the consent form allowing the researcher to contact them about the interview, they were also asked to write their identification number on this form. The aim of this identification number was to allow participants to withdraw their data from the study by contacting the researcher and providing this number only, without any personal details. This identification number also allowed the researcher to recruit participants for the interviews by matching the questionnaire pack with the consent forms signed by those who were selected to participate in the second phase of this research.

For the online version of the questionnaire pack, the online survey software SurveyGizmo was used. This software stores data strictly confidentially in the server. The researcher was the only person to have access to the data in the server by using a personal password. After completion of data gathering, full data was downloaded from the software to a computer file. For the interviews and the focus group session, participants had to sign another consent form (Appendix 6) prior to

the interview, agreeing to it being audio-recorded. A participant debrief was given to participants at the end of the interview. For the reporting of any findings from the interviews, pseudonyms were used at all times.

Both raw and processed data is stored in a computer file with password protection and will be retained for a period of 10 years. The data is also stored on a USB which has been kept in a locked filing cabinet together with the documents containing personal details of the participants (participants' consent forms), completed questionnaires, and participants' reports from the focus group activity. All data were stored separately from signed Informed Consent and all emails exchanged between the researcher and participants with regards to arranging interviews were erased from the researcher's email account, as well as all email addresses.

## **CHAPTER 4 PREPARATION OF QUANTITATIVE DATA AND PSYCHOMETRIC PROPERTIES OF TRANSLATED SCALES**

The aim of this chapter is to ensure that no violations hinder the interpretability of the results in the subsequent quantitative analysis in Chapter 5. To be able to achieve this aim several statistical tests were conducted including treating missing data, tests of assumptions, analyses of internal consistency of the scales, and a series of psychometric tests to explore whether the scales that have been adapted for the purpose of this research do measure the intended constructs indicated in Chapter 3 when adapted to the Brazilian Portuguese language. Prior to conducting any analyses a brief literature review on psychometric tests and the adaptation and validation process of transcultural instruments is presented.

### **4.1 PSYCHOMETRICS**

Psychometrics, the theory and technique applied to measure psychological processes, is an important practice in the field of psychosocial studies. This is mostly explained by the possibilities of measuring observational constructs, like for example, what people talk, feel and think about. In the field of alcohol and substance use, psychometric studies of standardized instruments play a significant role as it provides systematic tools for detaining and assessing underlying factors involved in substance use disorders and psychological outcomes.

The psychometric study of a particular instrument today is generally conducted by following the item response theory (IRT) approach. According to IRT, the quality of an assessment is characterized by the validity and reliability of the instrument. Validity refers to the extent to which an instrument is well-founded and corresponds accurately to the real world (Linden & Hambleton, 1997). In other words, it tests whether the instrument does indeed measure what it is supposed to be measuring. Reliability on the other hand, is the overall consistency of an instrument. An instrument is said to have a high reliability if it produces similar results under consistent and different conditions. By testing these two psychometric proprieties it is possible therefore to confirm whether an instrument meets scientific standards, however, it does not confirm *per se* whether the quality of an instrument can be generalised across different cultural contexts when translating and adapting to a different language. Due to such limitation, cultural sensitivity of an instrument should be carefully evaluated prior to developing any assumptions about the applicability of the measure in the new cultural context.

### **5.1.1 Adaptation and Validation of Transcultural Instruments**

Although a clear consensus on how to carry out an adaptation of an instrument into a different cultural context is not available, the International Test Commission (ITC, 2010) recommends that a few proprieties should be carefully addressed during the adaptation process including for example, semantics of the items (same meaning), the context (items' relevance), technique, the criteria (same interpretation), and construct (same theoretical construct). Hence, transcultural equivalence of an instrument is not achieved by the translation and back-translation process alone, but

by a complex process that considers the relevance of the original instrument and domains in the new culture as well as the appropriateness of each item of the instrument in terms of representing such concepts and domains in the new target population (Borsa, Damasio, & Bandeira 2012; Hui & Triandis, 1985).

The majority of instruments developed to measure factors associated with alcohol and substance use available today were developed and validated in English speaking countries. The process of adapting these existing instruments rather than developing new ones for a specifically different population has considerable advantages. Among the advantages is the opportunity of comparing data from different samples and from different backgrounds. By comparing these data it is possible to evaluate whether the same instrument assesses the same construct under the same theoretical and methodological perspective across different populations. The use of adapted instruments therefore, enables a greater ability to generalize and to investigate differences within an increasingly diverse population (Hambleton, 2005).

Given that the present research is cross-cultural in design a great focus was given to the adaptation and validation processes of the instruments selected for this research that had not been adapted to Brazilian Portuguese culture in the past. The purpose of conducting such processes was to give assurance that all the scales applied in this research are culturally acceptable, comprehensible, relevant, and have semantic equivalence with each other and with the original English versions. An equivalence between the adapted and the English versions of the scales is especially important in the context of the present research as it will help to address any differences or/and common features of alcohol and substance use among Brazilian immigrants in the UK and the general British population.



### **5.1.2 Procedures Adopted During the Adaptation and Validation Process of the Brazilian Portuguese Scales**

As indicated above, there is a lack of consensus in the literature on how to conduct cross-cultural adaptations of psychological instruments. Motivated by the absence of clear guidelines, the Brazilian researchers Borges, Damasio and Bandeira (2012) conducted a literature review on this matter. From this review, the authors introduced key considerations to be addressed during this process, which can be broadly applied in the adaptation and validation of any cross-cultural instrument. Based on that, the present research followed the key guidelines proposed by Borges, Damasio and Bandeira (2012) for adapting and validating the Brazilian Portuguese version of the scales. These guidelines are presented below.

#### Step 1: Instrument Translation into the New Language

During the translation process it is essential to ensure that the translated version of the instrument is not only suitable for the new context but it is also consistent with the original version (Borges, Damasio & Bandeira, 2012). To be able to achieve this, literal translation of items needs to be avoided as this often results in incomprehensible statements or rather limited target language fluency (Tanzer, 2005). An appropriate translation therefore requires a balanced treatment of linguistic, cultural, contextual, and scientific information. To translate the original scales (English) to the Brazilian Portuguese language, two bilingual translators who were also native speakers, culturally informed, and familiar with psychological studies were involved in this stage. Both translations were conducted separately.

#### Step 2: Synthesis of the Translated Versions

At this stage the two versions of the translated scales were synthesized by the two translators. Synthesizing the translated versions means comparing the two different translations and assessing the semantic, idiomatic, conceptual, linguistic, and contextual differences for the purpose of creating a single version. Great attention is given at this stage to avoid complex translations that may hinder the understanding of the population for whom the instrument is intended and also to avoid overly simplistic translations that underestimate the item content.

### Step 3: Evaluation of the Synthesized Version

The evaluation of the synthesized version of the translated questionnaires was conducted by the researcher together with the two translators. At this stage, the structure, layout, instrument instructions, and both the scope and adequacy of expression of each item were discussed as group.

### Step 4, 5, and 6: Back-Translation Procedures

Back-translation refers to translating the synthesized and revised versions of the instruments back to the original language. Its aim is to evaluate the extent to which the translated version reflects the item content of the original versions. To back-translate the Brazilian Portuguese version of the scales into English, two other independent bilingual translator were involved at this stage. As in the original translation stage, both translators worked separately at this stage and after the completion of this task both translators met to discuss and create a synthesized version of each scale. To evaluate the synthesized versions the four translators (both from the original translation stage and from the back-translation stage) and the researcher met to discuss possible discrepancies and to assess whether the meaning of the items was appropriate in both cultural contexts.

The final worksheets containing the translation, back translation and synthesized versions from each translated scale are illustrated in Appendices 7 and 8.

#### Step 7: Data Gathering

It is recommended in the literature, that prior to claiming that a new instrument is ready for application, a pilot study should be conducted (Beaton et al., 2000; Borges, Damasio and Badeira, 2012, Gjersing et al., 2010; Gudmundsson, 2009). In the current research the translated instruments were added to the questionnaire pack without conducting pilot tests. Reasons for not piloting the adapted scales into a smaller sample lie on the time restrictions of the current research. To conduct a full pilot test would have required a sample size of approximately one hundred participants to enable analyses of the factor structure of the scales. Similar to the majority of minority ethnic groups in the UK, Brazilian immigrants in the UK are a difficult group to reach, becoming even more difficult to research with sensitive topics like alcohol and substance use and use. Hence, to gather data from this population took several months.

#### Step 8: Psychometric Assessment

Complementary to the stages of instrument adaptation, statistical analyses must be performed to assess the extent to which the instrument can be considered valid. The procedures required during the validation of a psychological instrument are many, and like the adaptation process, there is no consensus on how much validity the instrument must possess for it to be considered valid. It is however, highly recommended that the factorial structure of an instrument should be evaluated during the validation process. By assessing the factorial structure of an instrument it is possible to confirm whether the instrument measures the intended construct(s).

The techniques of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are the most widely used techniques in the evaluation of the factorial structures (Brown, 2006). Differences between both techniques are further discussed in Section 4.5 of this Chapter. The main features of CFA are also discussed in Section 4.5 as this technique was the one selected to evaluate the factor structure of the adapted scales.

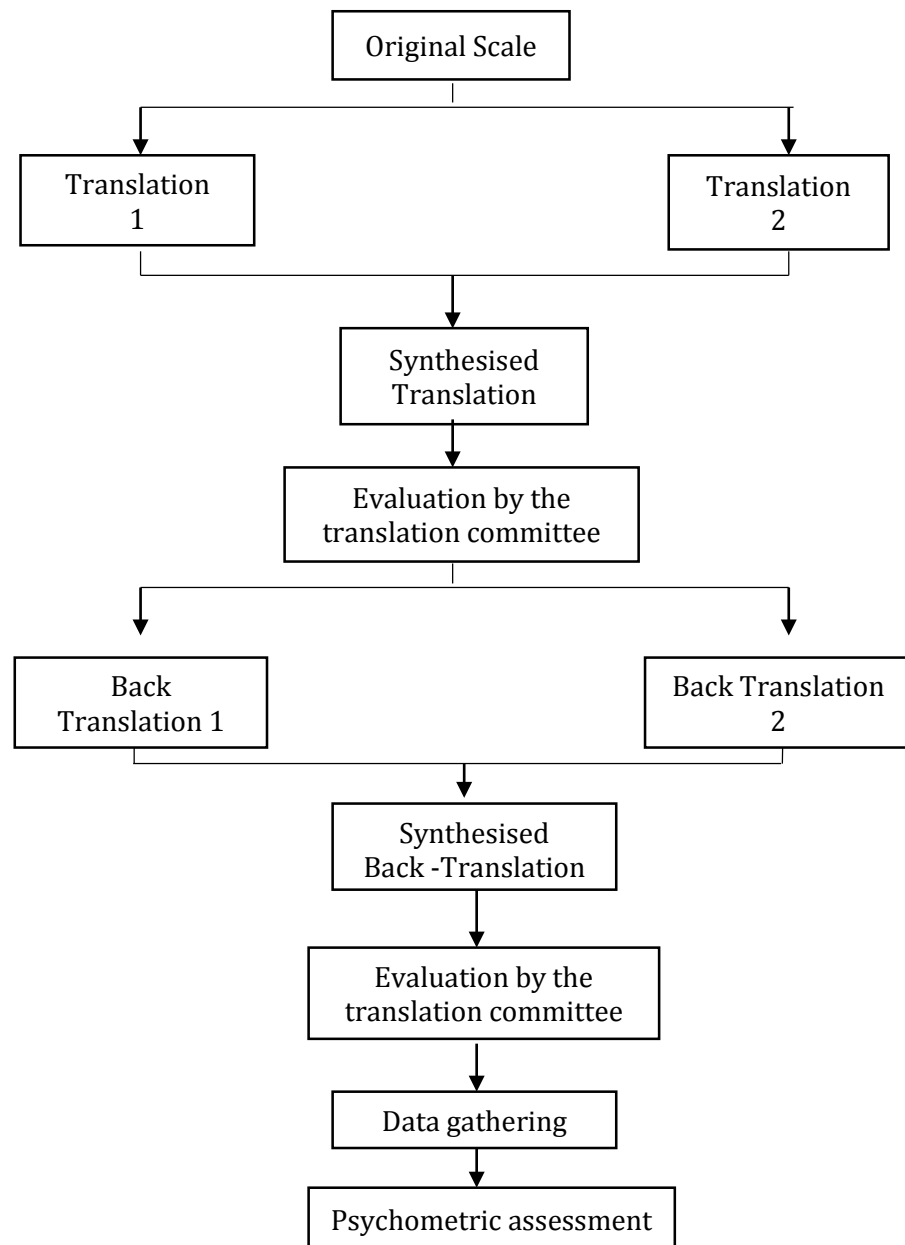


Figure 4.1 *Procedures for cross-cultural adaptation and validation processes*

## 4.2 TREATING MISSING DATA

In the present research, it was hypothesised that nature of missing data was missing completely at random (MCAR). This was based on the assumption that failing to complete some items in the questionnaires was due mostly to the lack of time, interest, or attention of the participants rather than a particular reason for not responding to a particular item (Collins, Schafer & Kan, 2007). To test this hypothesis, a MCAR's test (Little, 1988) was conducted and results indicated that data were indeed MCAR in both the UK sample ( $\chi^2=1819.08$ ;  $df=1732$ ;  $p=.07$ ) and the Brazil sample ( $\chi^2=2282.63$ ;  $df=2254$ ;  $p=.33$ ).

The expectation-maximization (EM) algorithm approach was then selected to treat the missing data. This is a maximum likelihood procedure and enables parameter estimations in probabilistic models with incomplete data (Schaefer, 1999). In particular, the EM attempts to find a parameter that maximizes the value of the observed data by following a quite straightforward procedure which includes identifying parameter estimators, estimating the missing values, filling in the data set with the estimated values to re-estimate the parameters, then using the re-estimated parameters to estimate missing values, and so on. The process of iterating parameters goes until the stable estimates finally converge (Schaefer, 1998).

The expectation-maximum procedure has been widely used in social sciences and was selected for this research for several reasons including conceptual simplicity, ease of implementation, and the fact that each iteration improves the parameter (Neal & Hinton, 1998). Additionally, EM generally works best when the estimate of missing information is small and the dimensionality of the data is not too large, which are both the case in this research data set. As indicated in the previous Chapter, Sub-

section 3.3.2, participants who failed to complete the first part of Substance and Alcohol Choice Scale (SACS-A), which consisted of the alcohol and drugs screening scale were excluded from the data set. Therefore, SACS-A was not included in the EM analysis, as well as, any categorical data (i.e. socio-demographic information). Table 4.1 illustrates the distribution and percentage of missing data according to scales prior to the application of EM algorithm to treat the missing data.

Table 4.1: *Number and percentage of missing data according to scales across samples*

<b>Data set</b>	<b>RS</b>	<b>SURPS</b>	<b>SACS-B</b>	<b>DM</b>	<b>PANAS</b>	<b>AIMSH</b>	<b>MASS</b>
	<b>N (%)</b>	<b>N (%)</b>	<b>N (%)</b>	<b>N (%)</b>	<b>N (%)</b>	<b>N (%)</b>	<b>N (%)</b>
<b>UK</b>	4 (2.4)	8 (4.8)	3(1.8)	3(1.8)	6(3.6)	2 (1.2)	3(1.8)
<b>Brazil</b>	3(1.8)	8(5.0)	8(5.0)	3(1.8)	11(6.8)		

*Note.* N = number of missing data; % = percentage of missing data, RS = Resilience Scale; SURPS = Substance Use Risky Profile Scale, SACS=Substance and Alcohol Choice Scale; DM=Drinking Motives, PANAS = Positive and Negative Affect Scale; AIMSH = Acculturation Scale; MASS=Multicultural Acculturative Stress Scale

### 5.3 LEVELS OF INTERNAL CONSISTENCY ANALYSIS

The analysis of Cronbach's alpha coefficient (Cronbach's  $\alpha$ ) has been used to explore the level of internal consistency of each scale used in this study. This analysis was first carried out independently for the sample in the UK and for the sample in Brazil. Only in the second phase of this analysis was that level of internal consistency explored in a single combined sample. The reason for analysing internal consistencies of the scales according to each sample is due to the fact that although the Brazilian immigrants in the UK that took part in this research do speak and understand Portuguese fluently, the cultural experience of living in the UK may have affected their ability to understand some of the questions. Therefore, to confirm that the

scales applied here in the UK do equally measure the same construct in both samples, this approach was adopted.

It is also important to mention that the majority of the scales had been initially designed to measure their constructs in young people and so a large part of the validity and reliability tests carried out hitherto were with samples younger than the one in the present research. By analysing the internal consistencies of these scales in this chapter, it will also confirm the reliability of the items in each scale to measure the same construct within the current sample age group.

Results from internal consistency analysis according to each scale/subscale for the UK sample, for the Brazil sample and for a combining sample (UK + Brazil) are presented at Table 4.2. Also indicated in this table are the internal consistencies reported in the original study of the scales.

*Table 4.2: Internal Consistencies (Cronbach's Alpha) of the Scales and Subscales According to Samples and Internal Consistencies from the Original Studies*

	<b>UK Sample</b>	<b>Brazil Sample</b>	<b>Combining Sample</b>	<b>Internal Consistency From Original Studies</b>
<b>SACS-Difficult Scale</b>	.87	.86	.86	.88
<b>RS</b>	.91	.83	.89	.82
<b>SURPS</b>				
<b>I/H</b>	.78	.76	.77	.75
<b>AS</b>	.75	.75	.76	.80
<b>IMP</b>	.69	.69	.69	.67
<b>SS</b>	.63	.77	.70	.72
<b>DMQ-R</b>				
<b>Copying</b>	.87	.89	.88	.85
<b>Conformity</b>	.74	.80	.77	.75
<b>Social</b>	.93	.93	.93	.79
<b>Enhancement</b>	.94	.94	.92	.87

	<b>Uk Sample</b>	<b>Brazil Sample</b>	<b>Combining Sample</b>	<b>Internal Consistency From Original Studies</b>
<b>PANAS</b>				
<b>PA</b>	.87	.86	.86	.88
<b>NA</b>	.81	.85	.83	.87
<b>AHIMSA</b>	.69			.70
<b>MASS</b>				
<b>Discrimination</b>	.85			.75
<b>Threat Cult. ID</b>	.56			.75
<b>Lack of Opport.</b>	.81			.86
<b>Homesickness</b>	.54			.66
<b>Language-barrier</b>	.84			.74

As illustrated in the table above, the majority of the scales'/subscales' internal consistencies were found to be at an adequate level, except for Threat to Cultural Identity and Homesickness subscales of MASS, which showed lower scores for alphas. According to statistical guidelines, coefficient alphas above .70 are generally preferred, however, there is abundant evidence in the current literature that such general standards should be used with caution as alpha scores are directly linked to the number of items in the scale (large number of items may result in high alpha scores and vice versa)(Cortina, 1993). As Threat to Cultural Identity has only five items and Homesickness only four items it is presumed that the low item numbers may have an effect on the alpha scores of these subscales. This assumption is further examined in Section 4.5 of this chapter where item correlations, parameter estimates, and factor loadings of each item are explored using confirmatory factor analysis.

#### **4.4 TESTS OF VIOLATION**

##### **4.4.1 Normality of Distribution**



The Table 4.3 shows the skewness and kurtosis values across scales/subscales.

Table 4.3: *Measures of Central Tendency for the Total Score for the Scales and Subscales*

Scales/Subscales	Mean	SD	Skewness	Kurtosis	Min	Max	Range
<b>SACS-Difficult Scale</b>	23.98	24.00	.25	-1.08	11	50	39
<b>Resilience Scale</b>	74.64	12.34	-.65	.81	25	98	73
<b>SURPS</b>	47.66	6.75	-.13	.65	23	66	63
<b>I/H</b>	12.05	2.93	.58	.76	7	25	18
<b>AS</b>	11.05	2.72	.10	-.32	5	20	15
<b>IMP</b>	11.77	2.72	.12	.21	5	20	15
<b>SS</b>	13.02	3.23	-.005	-.41	5	20	15
<b>DMQ-R</b>	44.05	8.47	.18	-1.07	20	91	71
<b>Copying</b>	10.08	5.33	.79	-.39	5	25	20
<b>Conformity</b>	6.78	3.24	1.84	2.57	2	17	15
<b>Social</b>	13.55	6.64	.13	.27	5	25	20
<b>Enhancement</b>	12.74	6.43	.03	.27	5	25	20
<b>PANAS</b>	45.77	14.77	.47	-.19	20	90	70
<b>PA</b>	22.58	7.36	-.74	-.32	10	45	40
<b>NA</b>	37.31	7.28	.47	-.19	10	50	35
<b>AHIMSA*</b>							
<b>Assimilation</b>	1.36	1.71	1.68	2.62	0	8	8
<b>Separation</b>	2.66	3.35	.71	-.31	0	8	8
<b>Integration</b>	3.31	4.28	.14	-.78	0	8	8
<b>Marginalization</b>	.82	2.42	2.06	4.82	0	6	6
<b>MASS</b>	50.88	11.32	.74	.65	26	89	63
<b>Discrimination</b>	13.03	5.01	1.06	.72	7	86	21
<b>Threat Cult. ID</b>	9.77	3.35	.78	.10	5	24	19
<b>Lack of Opport.</b>	10.88	4.28	.41	-.66	5	21	16
<b>Homesickness</b>	12.44	4.42	-.48	.82	4	19	15
<b>Language-barir.</b>	4.75	2.25	.19	.38	2	9	7

*Note.* Min = minimum scores, Max = maximum scores, \*AHIMSA is a ipsative data (forced choice question), total scores for AHIMS is equal to eight for all participants

As indicated in the table, the skewness and kurtosis values were negatively skewed in three subscales: DM Conformity Subscale, and AHIMS Assimilation and Marginalization subscales. Skewness value for the MASS Discrimination Subscale also suggests that the means of this scale were slightly negatively skewed. The boxplots

graph below indicates the outliers that are causing the negative skewness of the data in these four subscales.

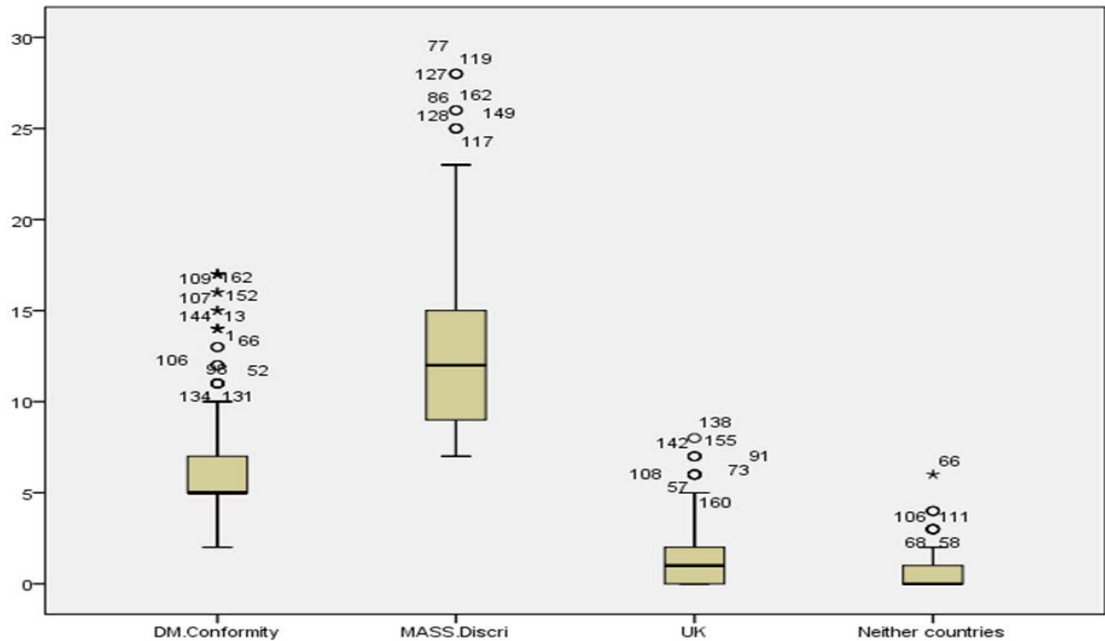


Figure 4.2 Boxplots for the DMQ Conformity subscale, AHIMS Assimilation and Marginalization subscales, and MASS Discrimination

As the graph illustrates, there are multiple outliers distributed throughout the variables. According to Field (2012), this type of distribution is commonly found in large sample sizes as the likelihood of having extreme scores may be due to the variety and range of possible values rather than the effect of Type I errors. Nevertheless, in large samples the power of the test may not be inflated by outliers suggesting that even small differences in the distribution of the data will lead to significant test results. For these reasons, Field (2012) suggests that little attention should be given to significance tests of normality in large samples, however, more attention to outliers is recommended (Field, 2012)

There are today several ways of dealing with outliers including transforming data, trimming the data, and robust methods. For the purposes of the present research, a bootstrap approach, which is a robust method, was selected. Bootstrap is a computer-based method that allows the research to make inference from data without making strong distributional assumptions (Efron & Tibshirani, 1998) leading therefore, to accurate results in tests where estimators (such as mean and variance) seem to not be equally distributed across the data. The way that bootstrap operates is quite straightforward. First, it creates small samples from the total sample (called bootstrap samples). Second, it calculates the parameter estimator that is of interest (i.e. mean) in each bootstrap sample. Last, confidence intervals for the parameter estimator are calculated from the collection of values obtained for each bootstrap sample statistic. At this point of the analysis, the normal approximation method calculates an approximate standardized error for the parameter using the sampling distribution resulting from all the bootstrap samples. As a result, bootstrap offers a better control over the probability of a Type I error by obtaining the standard error of the parameter estimator when calculating standard deviation of the parameter estimates from several bootstrap samples. As a general guideline, around 1000 or more bootstrap samples should be used to calculate accurate confidence intervals of estimators such as means (Efron & Tibshirani, 1998).

In sum, when the distributional assumptions of normal-theory are violated, bootstrapping creates an empirical sampling distribution where the parameter estimates are based on actual distribution of the population (Brown, 2002). In contrast to the theoretical sampling distributions, the bootstrapped sampling distribution is more tangible because it is based on the multiple samples produced

from the original data set. Table 4.4 shows bootstrapping results for mean and standard deviation for each scale.

Table 5.4: *Bootstrap Estimates of the Means and Standard Deviations*

	<b>SACS -D</b>	<b>Resilience</b>	<b>I/H SURPS</b>	<b>AS SURPS</b>	<b>IMP SUPRS</b>	<b>SS SURPS</b>
<b>Mean</b>	21.90-25.33	70.70-73.89	11.58-12.50	12.54-13.52	11.37-12.19	12.53-13.5
<b>SD</b>	9.95-11.53	12.84-15.30	2.73-3.38	2.77-4.42	2.46-3.12	2.77-3.42
	<b>Copying DMQ-R</b>	<b>Social DMQ-R</b>	<b>Conformity DMQ-R</b>	<b>Enhan DMQ-R</b>	<b>PA</b>	<b>NA</b>
<b>Mean</b>	11.79-13.80	12.59-14.60	6.29-7.30	9.27-10.90	21.52-23.68	36.22-38.38
<b>SD</b>	6.00-6.87	6.20-7.02	2.66-7.30	4.78-5.80	6.62-8.04	6.57-7.96
	<b><i>Assimilat AHISM</i></b>	<b><i>Separat AHISM</i></b>	<b><i>Integrat AHISM</i></b>	<b><i>Marginalis AHISM</i></b>	<b><i>Discriminat MASS</i></b>	
<b>Mean</b>	1.10-1.63	2.35-3.04	2.99-3.33	.83-1.25	12.28-13.82	
<b>SD</b>	1.44-2.01	2.02-2.48	2.01-3.39	1.39-2.69	4.31-5.64	
	<b>Threat Cultural ID MASS</b>	<b>Lack of Oportun. MASS</b>	<b>Homesickness MASS</b>	<b>Lang, barriers MASS</b>		
<b>Mean</b>	9.30-10.28	10.24-14.47	12.07-12.82	4.29-5.08		
<b>SD</b>	2.92-3.80	3.87-4.63	2.10-2.74	2.19-2.37		

#### 4.4.2 Homogeneity of Variance

To test whether the variance of each scale and subscale met the assumption of homogeneity, Levene's tests were conducted based on mean scores across both samples. As acculturation strategies and acculturative stress were measures applied

only amongst the Brazilian sample in the UK, these two scales were not included in this test. Table 4.4 represent the results from Levene's tests.

Table 4.5: *Levene's Test of Homogeneity of Variance (df1=1, df2=323)*

	<b>SACS D</b>	<b>Resilience</b>	<b>I/H SURPS</b>	<b>AS SURPS</b>	<b>IMP SUPRS</b>	<b>SS SURPS</b>
<b>Levene's test</b>	2.6	8.55	2.19	.32	.39	2.72
<b>Sig.</b>	.61	.004	.14	.57	.57	.10
	<b>Copying DMQ-R</b>	<b>Social DMQ-R</b>	<b>Conformity DMQ-R</b>	<b>Enhancement DMQ-R</b>	<b>PA</b>	<b>NA</b>
<b>Levene's test</b>	2.6	.01	9.22	.32	.004	2.72
<b>Sig.</b>	.61	.92	.003	.57	.95	.10

As can be seen from the table, the majority of the Levene's tests results are non-significant ( $p > .05$ ) indicating that the assumption of homogeneity of variance is met. This assumption however, was violated for the Resilience Scale ( $F(1,323)=8.55$ ,  $p=.004$ ) and for the DMQ-R Conformity Subscale ( $F(1,323)=9.22$ ,  $p=.003$ ). Field (2012) suggested that Levene's tests should not be interpreted alone when applied in large samples. Like tests of normality distribution, significant results can be found even with small differences in large samples. To further explore this assumption, Field (2012) suggests calculating the variance ratio (largest variance divided by smallest variance) for those cases where the homogeneity wasn't met. According to guidelines, homogeneity of variance can be assumed when the ratio is less than 2 (Field, 2012). Results indicate that variance ratio for the Resilience Scale is 1.33 and 1.08 for the DMQ-R Conformity Subscale. This result suggests that homogeneity of variance can still be assumed for these subscales.

#### **4.5 FACTORIAL VALIDITY TESTS OF THE BRAZILIAN VERSION SCALES**

In this section, confirmatory factor analysis (CFAs) were carried out to test whether the original factor structure of the scales can also be found when adapted to the Brazilian Portuguese language. The scales analysed here are: The Substances and Choices Scale – Difficulty Subscale (SACS-DS: Christie et al., 2007); The Substance Use Risk Profile Scale (SURPS: Conrod & Woicik, 2002), The Positive and Negative Affect Schedule (PANAS: Watson et al., 1988), Acculturation, Habits, and Interests Multicultural Scale for Adolescents (AHIMSA, Unger et al. 2002), and Multidimensional Acculturative Stress Scale (MASS: Jibeen and Khalid, 2010). The scales measuring drinking motives (DM-R, Hauck-Filho, Texeira, & Cooper, 2012) and levels of resilience (RS, (Damasio et al., 2011) did not have the factor structure explored in this research because, as indicated in Chapter 3, Section 3.3, both had their properties evaluated in the Brazilian population in the past.

##### **4.5.1 Confirmatory Factor Analysis**

Confirmatory factor analysis is a type of structural equation modelling (SEM) that deals specifically with the relationship between observed measures (indicators) (i.e. scale items, scale scores) and latent variables (factors). Unlike Exploratory Factor Analysis (EFA), which is also a type of SEM commonly used in psychometric studies, CFA is grounded on past evidence and theory. It is this a priori sense that drives the analysis to explore which factors exist in the data, which indicators are related to which factor, and so forth. By testing the validity of a factorial structure of an instrument measurement, the researcher seeks to determine whether the items do actually measure the intended factor. Due to these characteristics, CFA has become

one the most commonly used statistical procedures in applied research (Byrne, 2010).

Below is presented the key statistical information that this research sought to gain when trying to validate the Brazilian Portuguese version of the scales by applying CFAs.

- a) Psychometric Evaluation of the scales: investigation of the underlying factors of the instruments and the pattern of item-factor relationship (factor loading).
- b) Construct Validity: information about convergent and discriminant validities that are adjusted for measurement error and an error theory.
- c) Method Effect: evidence of existing covariation among indicators that are specified as part of the error theory of the measurement approach.
- d) Measurement Invariance Evaluation: confirmation that the measurement proprieties of the instruments are equivalent in subgroups of the population (i.e. gender, age group).

#### **4.5.2 Analysis Plan**

Except for the Substance Use Profile Scale, which had a slightly different approach to the others (this is discussed in the Subsection 4.5.7), CFAs were conducted for the remaining 4 scales in two stages. Stage 1 follows the same procedure in all the five scales and it sought to confirm the factor structure of the adapted scales within a full-sample. Stage 2 however, had two different approaches. For the SACS-Difficulty Subscale and the PANAS it involved the evaluation of the measurement invariance of these scales across a subsample of male participants and a subsample of female participants. Yet, from both scales that were applied amongst the Brazilian

participants in the UK only (the AISHM and the MASS), measurement invariance across gender groups was not evaluated due to sample size restrictions (N=164). To address this issue, bootstrapping was also conducted.

To confirm the factor structure of the adapted scales, the variance–covariance matrices were analysed using latent variable software programmes and maximum-likelihood minimization estimation procedures (AMOS 18.0). Multiple indexes were used to evaluate the goodness of model fit, including:  $\chi^2$  test, Standardized Mean Square Residuals (SMSR), Root Mean Square Error of Approximation (RMSEA; Steiger & Lind, 1980), and Comparative Fit Index (CFI; Bentler, 1990). Acceptable model fit was defined by the following criteria: RMSEA values below .06, SRMR values between .05 and .08, and CFI values between .90 and .95 (Chen, 2007). The decision to use multiple indices lies in the possibility of obtaining different information about model fit (i.e. absolute fit, parsimony correction fit, comparative fit). By getting acceptable indices from each model fit it is possible to provide a more conservative and reliable evaluation of each solution (Brown, 2006).

Next, for the SACS-DS and PANAS multi-group CFA (MGCFA) (Jöreskog, 1971) analyses were conducted to evaluate measurement invariance of these scales across gender groups. Results from MGCFA would ensure that potential difference in parameters could be interpreted reliably across females and males. For this MGCFA analyses, four different models were conducted. Model 1 (equal number of factors) is an unconstrained model and assesses whether the number of factors and the pattern of fixed and free parameters are equal across groups. Model 2 (equal factor loadings) examines if the factor loadings are equal across groups (i.e. it determines whether the measures have the same meaning and structure for different groups of respondents).



Model 3 (equal latent variance) investigates whether latent (co)variances are equal across groups. Finally, Model 4 (equal measurement residuals) evaluates whether the measurement residuals are equal across groups. The levels of assessment are ordered hierarchically, from Model 1 to Model 4. Thus, each constrained model is nested within a less restricted one (Cheung & Rensvold, 2002). Differences between the models were evaluated by CFI difference test ( $\Delta\text{CFI}$ ; Cheung & Rensvold, 2002; Vandenberg & Lance, 2000), RMSEA difference test ( $\Delta\text{RMSEA}$ ), and difference test ( $\Delta\text{SRMR}$ ). Significant differences ( $\Delta\text{CFI} \geq .01$ ,  $\Delta\text{RMSEA} \geq .01$ ,  $\Delta\text{SRMR} \geq .015$ ) observed between the goodness of fit indexes of the models indicate that the factor parameters are not the same across the specified groups (Cheng, 2007).

With regard to the AIHMS and the MASSA, MGCFA was not evaluated. Given that these two scales were completed by the participants in the UK ( $N=164$ ) only, the total sample size was reduced by nearly half. A critically important assumption associated with structural equation modelling (SEM) in the analysis of factor structure refers to the size of the sample. Small samples ( $N \leq 250$ , Hu & Bentler, 1999) tend to increase the risk of unreliable solutions and the risk for non-convergence when applying maximum-likelihood minimization (ML) procedures (Brown, 2010). In the case of MGCFA, sample size has an undesirable effect on rejection rates based on goodness of fit indexes. That is, the smaller the sample size, the larger are the standard errors of all goodness of fit indexes (Chen, 2007). Hence, instead of running MGCFA, a bootstrapping technique was applied at the second part of validation analysis of these two scales. By applying this technique it was possible to obtain better approximate standard errors of the parameters tested in the CFA. Moreover, as indicated in the above Section 4.4, there are possible outliers in two of AIHSM subscales (Assimilation and Marginalisation) and also in the MASS discrimination subscale. The lack of

normality in the data from these subscales stresses further the importance of conducting bootstrapping at this stage.

#### **4.5.3 The Substances and Choices Scale – Difficulties Scale (SACS-DS: Christie et al., 2007)**

The original SACS-DS consisted of five items that explore the context of alcohol and substance use and five items exploring behavioural indicators of serious consequences of use or harm. Although this subscale presents two possible factors (context of alcohol and substance use and consequences of use or harm), there is no indication in Christie and colleagues (2007) original study, that the SACS-DS is a two-factor model. In line with this, the evaluation of one-factor model of the Brazilian version of the SACS-DS was conducted within this research sample.

##### Stage 1

Initial CFA results indicated that the one-factor model of SACS did not fit the goodness of fit for the model,  $\chi^2=448.16$ ,  $df=44$ ,  $p<.001$ ; RMSEA=.15; SRMR = .08; CFI = .85. An examination of modification indices indicated that error covariance was found amongst all items. This covariance was particularly strong between items under the same question subtype (context of alcohol and substance use and consequences of use or harm) (MI ranging from 5.39 to 129.22). As a result, a second analysis was carried out allowing these errors to be correlated. By allowing this covariance the model fit improved significantly,  $\chi^2=44.98$ ,  $df=28$ ,  $p=.022$ ; RMSEA=.04; SRMR = .03; CFI = .99. Because errors were correlated between those items under the same question subtype, it was reasoned that error covariance was caused by content similarity of the items. Hence, it was accepted that the final model fit was the best

one. Results from the second CFA indicated standardized factor loading ranging from .44 to .86. Factor loadings results are displayed in Figure 4.3.

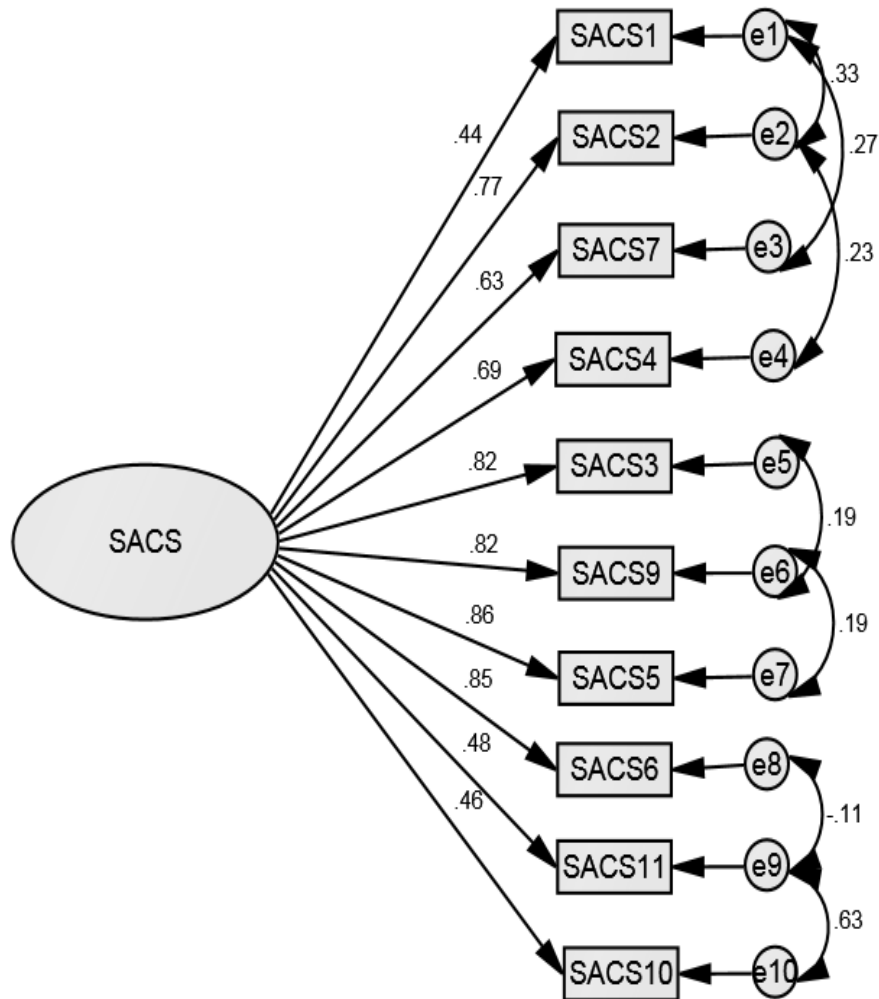


Figure 5.3 *Factor Loading of the SACS – Difficulty Subscale Brazilian version*

#### Stage 2

Factorial invariance analyses were then conducted for the single factor SACS-DS across gender groups. Results from the aforementioned models are presented in the Table 4.6.

The goodness of fit of Model 1 (equal number of factors) indicates that the two factor model is plausible for both men and women (i.e., same items measuring the same latent construct). Model 2 (equal factor loadings), which evaluated the assumption of metric invariance, also had an overall good fit to the data and did not significantly degrade fit relative to the first model, as well as, Model 3 (equal latent variance) ( $\Delta CFI \leq .01$ ,  $\Delta RMSEA \leq .01$ ,  $\Delta SRMR \leq .015$ ). Model 4 (equal measurement residuals) however, presented a significant degradation of the model as evaluated by the same criteria aforementioned. This means that the assumption of equal measurement residuals could not be achieved in the last model. Because it has been widely accepted that results from the measurement residuals invariance test does not compromise the conclusions about the measurement invariance as it tends to represent an overly restrictive test of the data on psychological research (Byrne, 2010), it was concluded that SACS-Difficulty Subscale Brazilian version equally measures the same construct across gender groups.

Table 5.6: *Fit index for gender MGCFA for the SACS-DF single model*

<b>SACS- DS (single model)</b>	CFI	$\Delta CFI$	RMSEA	$\Delta RMSEA$	SRMR	$\Delta SRMR$
<b>Model 1</b> Equal number of factors	.945		.082		.040	
<b>Model 2</b> Equal factor loading	.941	.004	.079	.003	.047	.007
<b>Model 3</b> Equal latent variance	.942	.001	.078	.001	.046	.001
<b>Model 4</b> Equal measurement residuals	.825	.001	.121	.043	.071	.025

#### 5.5.4 The Positive and Negative Affect Schedule (PANAS: Watson et al., 1988)

The PANAS consists of two subscales measuring two correlated constructs, the positive affect and negative affect scales. Although, Watson et al. (1998) presented

robust evidence that the PANAS measured both constructs in their original study it was only in 2004 that the two factor model of PANAS was further evaluated using CFA (Crawford & Henry, 2004). To evaluate the factor structure of PANAS, Crawford and Henry (2004) conducted a series of CFAs. From these analyses, it was found that the model that achieved a significantly better fit was the model that permitted all the errors under the same factor to be correlated. The authors chose to retain these correlated errors based on three arguments: a) specification of possible correlated errors a priori on the basis of theory and prior empirical findings; b) by keeping the number of correlations minimal (only 13 from 180 potentially correlated errors), and (c) the correlations between items, especially on the NA scale, were moderate in magnitude. The two factor model evaluation of the PANAS Brazilian version is described below.

#### Stage 1

Initial CFA results resulted in a poor fitting model of PANAS,  $\chi^2=430.28$ ,  $df=224$ ,  $p<.001$ ; RMSEA=.09; SRMR = .09; CFI = .80. This result was similar to the two factor model tested by Crawford and Henry (2004). As indicated above, this model achieved a superior model fit only when residuals were correlated. Based on that an examination of modification indices was conducted and the two-factor model was re-specified permitting correlated error terms for subgroups of items. Although a better fit was achieved, it was still not within acceptable standards,  $\chi^2=430.28$ ,  $df=224$ ,  $p<.001$ ; RMSEA=.07; SRMR = .09; CFI = .91. The matrices of the standardized residuals were then analysed. Two items from the factor positive affect (item 12 = Alertto/Alert, item 17 = Atento/Attentive) were shown to exceed the value of 2.58, which is recommended as the cut-off point value – anything bigger than that is

considered to be large (Joreskob & Sorbom, 1993). The residuals of these two items were large when correlated with several items. In the case of item 17, residuals were large when correlated with two items from the negative affect factor (items 15 and 20). Yet, item 12 had large residuals when correlated with seven items from the negative affect factor (items 7, 8, 11, 13, 15, 18, 20). Therefore, these two items were excluded from the positive affect factor, and the CFA were conducted again with the remaining items. From this analysis, a good model fit was then achieved  $\chi^2=255.54$ ,  $df=122$ ,  $p<.001$ ; RMSEA=.05; SRMR = .05; CFI = .93. The final CFA results showed that PA and NA are two correlated constructors and standardized factor loadings from the remaining 18 items ranged from .44 to .84. Factor loadings results are displayed in Figure 4.4.

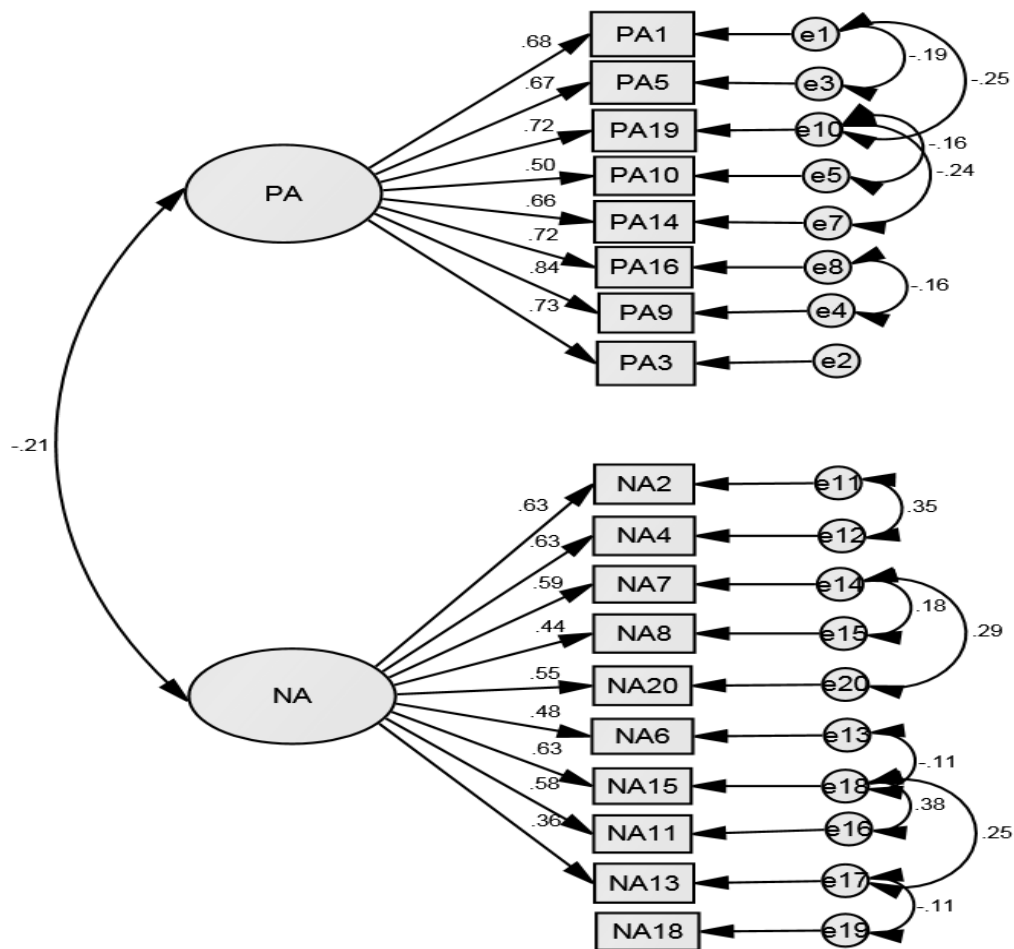


Figure 4.4 Factor loading of PANAS Brazilian version – 18 items

Stage 2

Factorial invariance analyses were then conducted for both factors of the PANAS – 18 items across gender groups. The goodness of fit of Model 1 (equal number of factors) demonstrated, by the acceptable goodness of fit indexes, that the two factor model is plausible for both men and women (i.e., same items measuring the same latent construct), matching the criteria of configural invariance (Chen, 2007). Model 2 (equal factor loadings), which evaluated the assumption of metric invariance, also had an overall good fit to the data and did not significantly degrade fit relative to the first model ( $\Delta CFI \leq .01$ ,  $\Delta RMSEA \leq .01$ ,  $\Delta SRMR \leq .015$ ).

Considering the same criteria aforementioned ( $\Delta CFI$ ,  $\Delta RMSEA$ ,  $\Delta SRMR$ ), the fit of Model 3 (equal latent variance) also presented satisfactory results regarding to equal variance across groups findings, as well as, Model 4 (equal measurement residuals).

Table 5.7: *Fit Index for gender MGCFA for the PANAS – 18 items*

PANAS – 18 items	CFI	$\Delta CFI$	RMSEA	$\Delta RMSEA$	SRMR	$\Delta SRMR$
<b>Model 1</b> Equal number of factors	.929		.043		.060	
<b>Model 2</b> Equal factor loading	.927	.002	.042	.001	.063	.003
<b>Model 3</b> Equal latent variance	.926	.001	.042	.000	.064	.001
<b>Model 4</b> Equal measurement residuals	.928	.001	.040	.002	.065	.001

#### **4.5.5 Acculturation, Habits, and Interests Multicultural Scale for Adolescents**

**(AHIMSA, Unger et al. 2002)**

The AHIMSA was developed to measure Berry's (1998) fourfold model of acculturation - integration, assimilation, separation and marginalization. The type of data derived from this scale is ipsative, which means in the context of this research that the total score of the scale (the sum of the scores from all the four subscales) will sum the value of eight for all participants equally.

In the original study that explored the psychometric proprieties of this scale (Unger et al., 2002) exploratory factor analysis was conducted to determine whether the eight AHIMSA items clustered into two or more common factors. Results from this test indicated that a single-factor solution was the appropriate one. Therefore, CFAs were conducted to determine whether the AHIMSA does also represent a single-factor model when translated and applied to a Brazilian sample.

##### Stage 1

Initial results indicated that the single-factor model of the Brazilian Portuguese version of the AHIMSA did not approach values that reflected an acceptable fit to the data,  $\chi^2=67.27$ ,  $df=20$ ,  $p<.001$ ; RMSEA=.012; SRMR = .06; CFI = .76. An inspection of modification indices indicated misspecified error covariance for six items (the pairing of items 1-7, 4-5, 4-6, and 6-8, MI ranging from 4.40 to 16.57). Since error covariance may result from systematic error either due to response characteristics (e.g., social desirability) or aspects among items themselves error terms for items these items were permitted to covary. It was reasoned that these relationships were likely due to the similar wording used in these items. Results from this second analysis revealed



that the one- factor model that allowed errors to be correlated presented a

significantly better fit,  $\chi^2=16.37$ ,  $df=15$ ,  $p=358$ ; RMSEA=.02; SRMR = .06; CFI = .99.

### Stage 2: Bootstrapping

Bootstrapped confidence intervals (90%) were computed to ensure the quality of the averaged estimators. As recommended by Brown (2006), a 500 bootstrap

sample is enough to provide reliable confidence intervals on CFAs. This means that from the AIHMSA one-factor model presented above, bootstrapping generated 500 random samples of 164 participants from the original data, fitting the single factor CFA model in each sample 500 times, and then averaging the results across the 500 analysis. Table 4.8 present bootstrapping results for each indicator of the one-factor model of AIHMSA. The first column of the table, SE represents the bootstrap estimate of the standard errors of the factor loading, whereas bias indicates the difference between the original estimates and the averaged bootstrapped estimates. The following three columns indicate the confidence interval of the unstandardized factor loading, which is the confidence intervals of the original sample parameter estimates using standard errors that have been adjusted on the basis of bootstrapped results. Results in the last column, indicates how small the confidence interval must be to include the value of zero. For example, the p value of .008 indicates that the confidence interval for AHIMSA1 must be at 99.7% level in order for the lower-bound value to be zero (Byrne, 2001).

Table 4.8: *Bootstrap Estimate of the Standard Errors and Confidence Interval of the Factor Loadings of the One Factor Model of Brazilian Portuguese*

Items	SE	Bias	CI Estimator	CI Lower	CI Upper	P
AHIMSA1	.103	.008	.466	.293	.639	.001
AHIMSA2	.105	.003	.193	.019	.351	.069
AHIMSA3	.093	.006	.389	.220	.528	.001
AHIMSA4	.105	-.001	.220	.040	.384	.045
AHIMSA5	.089	-.005	.173	.015	.310	.079
AHIMSA6	.112	-.008	.213	.034	.383	.061
AHIMSA7	.077	.009	.785	.678	.917	.004
AHIMSA8	.086	-.009	.788	.628	.910	.004

Note. CI=confidence interval. SE=Standardized Error.

#### 4.5.6 Multidimensional Acculturative Stress Scale (MASS: Jibeen & Khalid, 2010).

The MASS was developed to measure five distinct factors: discrimination, threat to ethnic identity, lack of opportunities for occupational and financial mobility, homesickness, and language barrier. As mentioned in the previous Chapter, Section 4.4, one item was excluded from the threat to ethnic subscale during the translation process. Therefore, the Portuguese Brazilian translation of the MASS consisted of 23 items rather than 24.

In the original study conducted by Jibeen and Khalid (2010), the factor structure of the MASS subscales was analysed using exploratory factor analyses. Although the findings from this study provided initial validity evidence for the MASS, the authors strongly recommended that confirmatory factor analysis should be conducted to test the goodness of fit of factor structure of the MASS to provide further evidence for the validity of the constructs.

It is explored below whether the 23 items associated with each factor of the MASS do indeed test each of the five factors emerging from the exploratory factor analysis in the original study when applied to the Brazilian sample.

#### Stage 1: model structure

Results from the CFA suggested that the four factor model of MASS fits the data poorly,  $\chi^2=541.06$ ,  $df=220$ ,  $p<.001$ ; RMSEA=.09; SRMR = .09; CFI = .76. An inspection of localized areas of strain in this model indicated that few items correlated strongly with each other, 1-2, 2-3, 3-4, 10-11, 14-17, 15-17, and 19-21 (MI ranging from 41.25 to 5.47). The five-factor model was re-specified including these errors covariance as freely estimated parameters. This re-specification resulted in a significant improvement in model fit,  $\chi^2=383.59$ ,  $df=213$ ,  $p<.001$ ; RMSEA=.07; SRMR = .08; CFI = .87, although overall fit was still unsatisfactory. An analysis of the regression weights suggested that item 10 in the identity threat subscale (I feel that I am neither Brazilian nor British) did not load significantly on the expected factor ( $p=.08$ ) and neither any other factor. Moreover, quite a few items indicated to load on different factors: items 4 (I think that many opportunities are denied to me because I am Brazilian) and 12 (I feel sad when I do not see my cultural roots in this society) on the lack of opportunity subscale, items 3 (I am constantly reminded of my minority status) and 21(I think that my family responsibilities have increased after coming to Britain) on the language barriers subscale, item 5 (I think that British society discriminates against me just because I am Brazilian) on the identity threat subscale, and item 16 (I am disappointed that my standard of living is not what I hoped for before coming to Britain) on the discrimination subscales. Another analysis was then conducted where item 10 was excluded from the model and the aforementioned

items allowed to cross-load on other factors. This re-specification resulted in a significant improvement in model fit,  $\chi^2=305.95$ ,  $df=187$ ,  $p<.001$ ; RMSEA=.06; SRMR = .07; CFI = .90. All the cross-loading items indicated to load significantly on the other factors ( $p<.05$ ). Although the criterion for RMSEA is values below .06, it was decided to accept the .06 value as an acceptable one. This is justified by Brown's (2002) recommendation that when the fit indices fall in 'marginal' ranges, especially in situations where the sample size is small it is important to consider the consistency of the model fit as expressed by the other types of fit indices.

It was decided that the model that allowed a few errors to be correlated and multi-vocal item loading (i.e. items that have salient loadings on two or more factors in the model) as the acceptable model fit. The rationale for this decision is found in the context of the items. For example, the chances that covariance between errors (items 1-2, 2-3, 3-4, 14-17, 15-17, and 19-21) is due to content overlap among those items is high (i.e. item 1 'British people treat me like a foreigner' and item 2 'I am treated differently because of my race or skin colour'). With regard to the items that have salient loadings on two factors, an individual analysis of the content of each item suggests that the way in which Pakistani immigrants in Canada (population from the original study) perceive some of the questions might differ to the Brazilian immigrants in the UK for two particular reasons: a) differences in cultural and social norms between both cultures (Brazilian and Pakistani) and b) different views and policies toward migrants between two countries (Canada and the UK). The exclusion of item 10 is justified by the content of the item to not fit to the context of the scale. 'I feel that I am neither Brazilian nor British' might be related more with the acculturative dimension marginalization rather than acculturative stress.

**Stage 2: Bootstrapping**

As with the AIHMSA, bootstrapped confidence intervals (90%) were computed to assure the quality of the averaged estimators (500 bootstrap samples). Table 4.9 presents bootstrapping results for each indicator of the five-factor model of the MASS.

Table 4.9: *Bootstrap Estimates of the Standard Errors And Confidence Interval of the Factor Loadings of the Five-Factor Model of the Brazilian Portuguese Adapted Version of the MASS*

Items	SE	Bias	CI Estimator	CI Lower	CI Upper	p
<b><u>Discrimination</u></b>						
MASS1	.147	.016	.81	.60	1.10	.004
MASS2	.136	.013	.96	.75	1.20	.004
MASS3	.155	.013	.99	.75	1.24	.007
MASS4	.196	.120	1.25	1.00	1.64	.003
MASS5	.235	.059	1.54	1.24	1.93	.008
MASS6	.128	.007	.88	.69	1.11	.004
MASS7	.000	.000	1.00	1.00	1.00	...
MASS16*	.175	.014	.34	.05	.60	.077
<b><u>Threat to Cultural ID</u></b>						
MASS5*	.328	.015	-.44	-.93	-.20	.005
MASS8	.000	.000	1.00	1.00	...	...
MASS9	.138	.354	2.03	1.04	5.58	.004
MASS11	.335	.10	.44	.03	1.14	.072
MASS12	.101	.101	.95	.47	1.64	.007
<b><u>Lack of Opportunity</u></b>						
MASS4*	.115	.011	.30	.14	.51	.008
MASS12*	.147	.004	.29	.04	.52	.055
MASS13	.000	.000	1.00	1.00	1.00	...
MASS14	.166	.014	1.23	1.00	1.55	.004
MASS15	.167	.003	1.11	.89	1.47	.003
MASS16	.148	.007	.61	.40	.90	.002
MASS17	.196	.009	1.21	.98	1.62	.002
<b><u>Homesickness</u></b>						
MASS18	.000	.000	1.00	1.00	1.00	...
MASS19	.213	.026	.66	.36	1.06	.005
MASS20	.246	.027	1.03	.78	1.52	.003
MASS21	.278	.005	.64	.33	1.28	.007
<b><u>Language Barriers</u></b>						
MASS3*	.084	.002	-.22	-.37	-.09	.011
MASS21*	.127	.002	.27	-.52	-.08	.010
MASS22	.000	.000	1.00	1.00	1.00	-
MASS23	.248	.061	1.28	1.00	1.82	.006

### **5.5.3 The Substance Use Risk Profile Scale (SURPS: Conrod & Woicik, 2002)**

For the Brazilian Portuguese adaptation of the SURPS a slightly different approach was adopted. The modification regards the structure of CFAs, as only the first stage of CFA was conducted. Therefore, the factor invariance analysis across gender groups was not explored nor the bootstrapping technique.

The reason for following a slighter different approach with the SURPS was because the results presented here are originally from an investigation of the psychometric proprieties of the Brazilian Portuguese version of this scale that was carried out prior to the development of the present chapter. Results from this investigation were published by Canfield, Gilvarry, and Koller (2014). Due to the structure of the journal, which recommends a standard article's size, it was decided by the research team to focus on convergent validity aspects of the SURPS rather than possible invariance aspects of the scale across gender groups. Therefore, it was explored in the published paper whether the four personality types measured by the SURPS would differentially predict motivation for specific psychoactive substance use. The full article can be found in Appendix 1.

In the previous Chapter, section 4.4, it was indicated that the SURPS is a four factor analysis designed to measure four distinct personality risk types for alcohol and substance misuse (hopelessness, anxiety sensitivity, impulsivity, and sensation seeking). It was then explored whether the Portuguese version of the SURPS would be a valid instrument for measuring these four distinct personality variables within a Brazilian sample.

Initial results revealed that that the four factor model fits the data with limitation as the comparative fit index presents slightly lower values than recommended,

$\chi^2=475.77$ ,  $df=224$ ,  $p<.001$ ; RMSEA=.06; SRMR = .07; CFI = .85. An inspection of localized areas of strain in this model indicated that 4 of the 6 reverse-worded items had strong correlation with each other error, 1-4, 1-7, 7-23 (MI ranging from 8.43 to 14.64), and the unique non-reversed item in the subscale I/H (item 17) had correlated error with the reverse item 20 (MI 11.83). Consideration of this outcome suggested that the covariance of these error items was likely due to a method effect, stemming from having positive and negative items together. As indicated by Marsh (1996), reversed items often lead to problems, particularly poor model fit in factor models due to the likelihood of method effects increased with less verbose participants. Therefore, the four-factor model was re-specified including this error covariance as freely estimated parameters. This re-specification resulted in a significant improvement in model fit,  $\chi^2=429.16$ ,  $df=220$ ,  $p<.001$ ; RMSEA=.05; SRMR = .07; CFI = .87, although overall fit was still unsatisfactory (CFI<.90). Fit diagnostics revealed the existence of other significant error covariance between items 8-21 and 14-21 in the AS subscale, 2-15 and 11-22 in the IMP subscale, and 3-16 in the SS subscale (MI ranging from 5.28 to 10.25). Another analysis was then conducted that allowed the correlation of the errors of these items. By relaxing the error covariance between these items the model fit provided acceptable indices,  $\chi^2=378.53$ ,  $df=215$ ,  $p<.001$ ; RMSEA=.05; SRMR = .07; CFI = .90.

As the model with correlated errors possessed superior fit compared with their more constrained counterparts, we have chosen to retain these correlated errors and accept this model as the best one. The decision for considering that these correlated errors were appropriate for the Brazilian version of the SURPS is due to: a) the high likelihood of correlated errors in the I/H subscale being caused by the presence of reversed items; b) little covariance between items that share similar content (i.e.

words 'scares' in item 14 and 'frightens' in 21 were translated to a unique Portuguese word, 'assustado'); and (c) with 5 items in the AS and IMP subscales there are 10 potential correlated errors in each subscale yet only permit 2 in each, in the SS subscale there are 14 potential correlated errors yet only permit 1, thus the model is far from being fully saturated. Figure 5.4 shows the factor loadings and factor correlations for the final four-factor model of Brazilian SURPS.

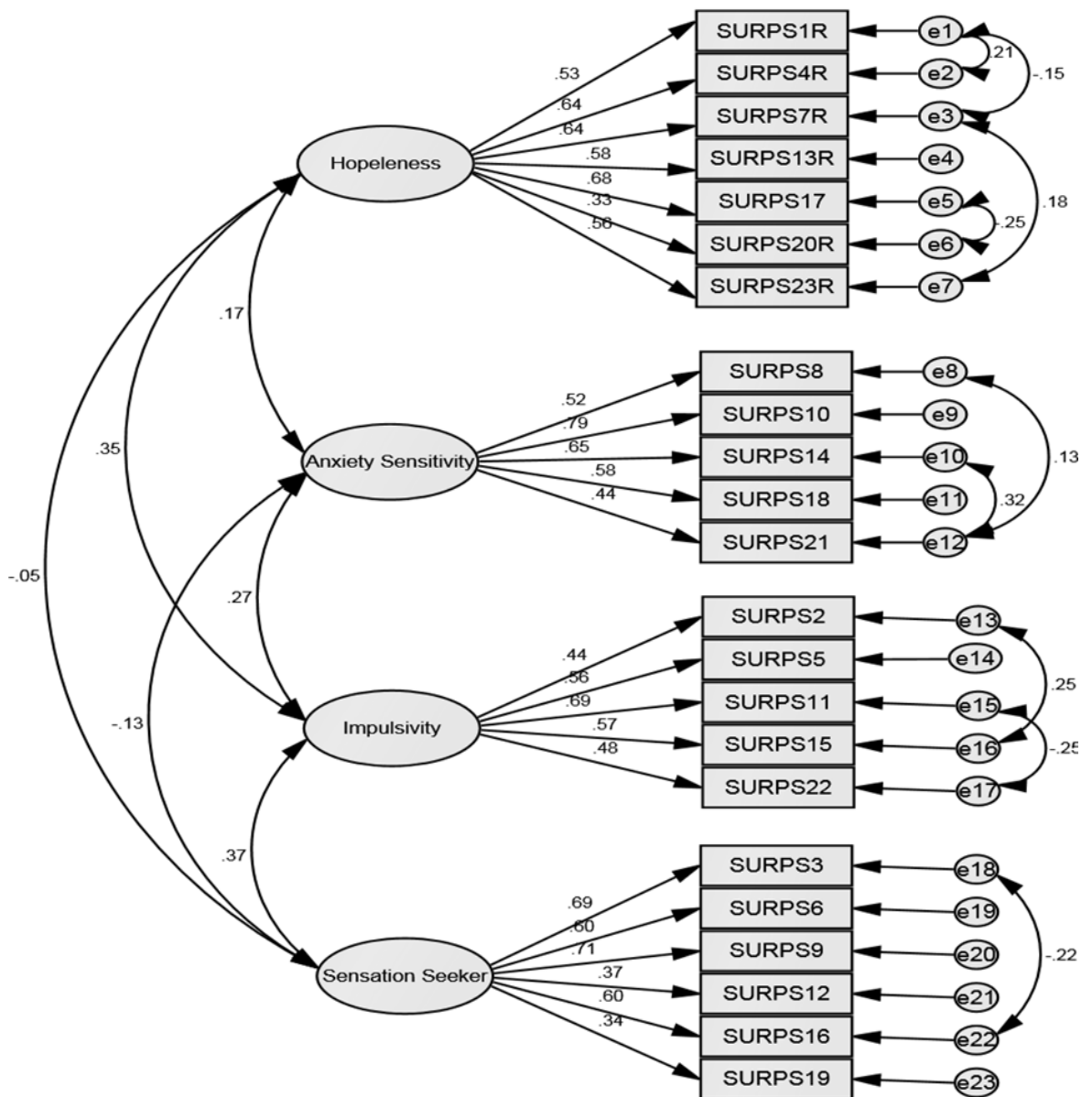


Figure 4.4 Factor loading of the SURPS



#### **4.6 FINAL COMMENTS**

This chapter began by addressing key concepts related to the study of psychometric proprieties of instruments designed to measure psychological constructs. A particular emphasis was given to the item response theory (IRT) approach due to its methods of assessing validity and reliability features of an instrument. Given the aim of this Chapter, which was to ensure that no violations would affect the analysis of the quantitative data in the following Chapter, a great focus was given to assure that the instruments selected for this research project do measure their intended constructs when adapted to the Brazilian Portuguese language.

The process of adapting and validating these scales was conducted by following guidelines proposed by Damasio et al. (2012). The initial stages involved translating the scales from English to Portuguese and then back-translating from Portuguese to English, whereas in the later stages a range of confirmatory factor analyses were carried out to explore the factorial structure of the scales. The final results from the confirmatory factor analyses revealed that all instruments adapted for the purpose of this study tend to measure the original intended constructs.

Results from other statistical tests including treating missing data and tests of assumptions (distribution and homogeneity) are also presented in this Chapter. A few cases of missing information were presented in the data set and rather than deleting these cases expectation-maximization (EM) was used to treat this. With regard to the tests of distribution and homogeneity, parametric assumptions were met in the majority of the cases. For the few cases where these assumptions were violated, information was reported on how these issues were addressed.

## CHAPTER 5 QUANTITATIVE ANALYSIS

In the previous two chapters an outline of the variables that were used to describe and explain the alcohol and substance use patterns of this research population was introduced. This chapter will describe the demographic characteristics of this research population, the distribution of alcohol and substance use across the two countries, and the role of psychological factors that may be shown to play a part in this substance use. The prevalence of acculturative factors amongst the Brazilian immigrants in the UK will also be explored. Lastly, investigations will explore whether predictor variables differ by patterns of substance use according to country of residence and whether acculturative variables predict substance use for Brazilian immigrants in the UK.

### 5.1 DEMOGRAPHIC DATA

#### 5.1.1 Occupation

Participants were requested to list their current occupation in the demographic questionnaire. Those who were studying were asked to indicate the type of course on which they were enrolled.

Job types for this classification were clustered into occupation categories according to the UK Standard Occupational Classification (SOC2010) (ONS, 2010). The SOC2010 brings together occupational groups which are similar in terms of the qualifications, training, skills and experience commonly associated with the competent performance of work tasks. From this classification, occupational

categories were classified into groups according to the concept of 'skill level' and 'skill specialisation'.

In cross-cultural studies however, level of skills might not relate to the same educational and income levels associated with a particular job across countries. For example, an electrician in the UK is required to achieve a number of specific qualifications, whereas in Brazil this is not required. Furthermore, a sales or customer service occupation in the UK tends to provide a higher income than a fully qualified school teacher would earn in Brazil. Regardless of such occupation differences across countries, the level of skills involved in a job remains very likely to represent an indicator of socioeconomic status as the occupational prestige and occupation class attached to jobs share significant similarities between Western countries.

More details about the SOC- 2010 scheme including examples of job activities that are representative of each category can be found in Appendix 9.

#### Occupation of Brazilians Residents in the UK

The majority of participants who answered this question reported working in elementary occupations (36.4%) (e.g. cleaner, kitchen assistant). The second most common occupation was in the associate personal service occupations (16.5%) (e.g. child-minder, carer) followed by professional occupations and administrative and secretarial occupations (9.3%) (e.g. telephonists, office assistants). A small proportion of the participants (6.6%) indicated that they were students. Table 5.1 presents the number of participants and the percentage of the sample within each occupational category and the level of skills related to the job.

Table 5.1: *Job Skill Level and Occupational Categories of Brazilians in the UK*

	Number of Participants	% of Sample in the UK
<b>Skill level 4</b>	<b>15</b>	<b>9.9</b>
Manager and Senior Officials	1	0.7
Professional Occupations	14	9.3
<b>Skill level 3</b>	<b>36</b>	<b>23.8</b>
Associate Professional and Technical Occupations	11	7.3
Administrative and Secretarial Occupations	14	9.3
Skilled Trade Occupations	11	7.3
<b>Skill level 2</b>	<b>33</b>	<b>21.8</b>
Personal Service Occupations	25	16.5
Sales and Customer Service Occupations	8	5.3
<b>Skill level 1</b>	<b>55</b>	<b>36.4</b>
Elementary Occupations	55	
<b>Housewife/husband</b>	<b>2</b>	<b>1.3</b>
<b>Student</b>	<b>10</b>	<b>6.6</b>

In addition, 26% of the Brazilian students in the UK reported part-time working.

Most reported qualifications levels of Bachelor Degrees (15.2%) and Technical Qualifications (7.3%). Only a small number of participants indicated that they were enrolled on a Language Proficiency course (3.7%). Table 5.2 illustrates the number of participants and the percentage this represents according to level of study.

Table 5.2: *Type of Study Course of the Sample in the UK*

Course Type	Number of participants	% of the sample in the UK
Language Proficiency	6	3.7
Second School/A Levels	4	2.4
Technical Qualification	12	7.3
Bachelor's Degree	25	15.2
Master's Degree	5	3.0
PhD programme	10	6.1

Overall, the types of occupation of the Brazilian immigrants that took part in this study are similar to the ones reported in Evans et al.' (2014) mapping study of Brazilians in London and with the England and Wales Census (2011), which indicates a large proportion of Brazilians in elementary occupations.

#### Occupation of Brazilians Residents in Brazil

The majority of participants in Brazil who answered the question about occupation reported studying as their main occupation (30.6%). A considerable number of participants reported working in professional occupations (17.2%) and administrative and secretarial occupations (14.6%). Table 5.3 presents the number of participants and the percentage of the sample in each occupational category and level of skill.

Table 5.3: *Occupational Categories of Brazilians in Brazil*

	<b>Number of Participants</b>	<b>% of Sample in Brazil</b>
<b>Skill level 4</b>	<b>27</b>	<b>17.2</b>
Manager and Senior Officials	-	-
Professional Occupations	27	
<b>Skill level 3</b>	<b>43</b>	<b>27.4</b>
Associate Professional and Technical Occupations	23	14.6
Administrative and Secretarial Occupations	6	3.8
Skilled Trade Occupations	14	8.9
<b>Skill level 2</b>	<b>21</b>	<b>13.4</b>
Personal Service Occupations	3	1.9
Sales and Customer Service Occupations	11	7.0
Process, plant and machine operatives	7	4.4
<b>Skill level 1</b>	<b>17</b>	<b>10.8</b>
Elementary Occupations		
<b>Housewife/husband</b>	<b>1</b>	<b>0.6</b>
<b>Student</b>	<b>48</b>	<b>30.6</b>

With respect to working and studying, 33% of participants that answered this question reported to be engaged in both activities together. Bachelor's Degree students (50.3%) were those who most frequently reported both working and studying, followed by Master's Degree courses (9.3%). Table 5.4 represents the number of participants and the percentage this represents according to the type of course undertaken.

Table 5.4: *Type of Studying Course of the Sample in Brazil*

<b>Course Type</b>	<b>Number of participants</b>	<b>% of the sample in Brazil</b>
Language Proficiency	1	0.6
Second Education/A Levels	-	-
Technical Qualification	3	1.9
Bachelor's Degree	81	50.3
Master's Degree	15	9.3
PhD programme	1	0.6

As can be seen in the table above, none of the participants that answered this question in the sample in Brazil reported to be undertaking high school or A level studies. The absence of participants at this level of study is due to differences in the education systems between both countries. In Brazil, for example, there are no A Level courses and the average age at which the majority of students leave secondary schooling is 17 years old. As the age criteria for participating in this study was 18 years or above, it is most likely that those participants in Brazil that were undertaking courses related to secondary school did not meet the minimum age criteria for participating in this study.

Analysis of Differences in Socioeconomic Status measured by Occupation level of Skill according to Country of Samples

Chi-square tests were conducted to explore the possibility that there is a significant association between socioeconomic status measured by occupational level of skills, and whether the participant resides in the UK or in Brazil. For those participants who indicated student status as their main occupation, parents' job skill level was applied (the higher level between the father and the mother). Results from this analysis revealed a significant association between all the four levels of occupational skills across samples:  $\chi^2(3) = 37.41, p < .001$ .

In general, the majority of Brazilians in the UK were associated with both levels of skill 1 and 2, whereas Brazilians in Brazil with levels of skill 3 and 4. The disparity between these categories and across samples might be explained by the general tendency that when migrating to another country, the individual tends to drop a social class and work in jobs that are not at the same level as the one they had prior to leaving their home country.

Additionally, there is a noticeable difference in the number of participants that reported having student status across both countries as well as the type of course being studied as presented in Tables 5.3 and 5.4. With respect to these differences between both countries, it is important to bear in mind that the length of time that students spend at a university on undergraduate/postgraduate degree courses is higher in Brazil than in the UK (i.e. the average full-time Bachelor's Degree programme is five years and a Master's Degree programme is two years).

Furthermore, because a significant proportion of the student population in Brazil tend to take part in internship programmes related to their area of study during

their degree courses, it might be that the internship was indicated as the job type.

This might also help to explain the lower number of participants in Brazil that work in elementary occupations. However, it does not necessarily mean that those who indicated being in more professional occupations in Brazil are in higher paid jobs than those in elementary occupations in the UK.

### 5.1.2 Habitation

Two items about habitation were asked in the socio-demographic questionnaire. The first was about with whom the participants reside, while the second item was about the number of people residing in the same house including the participant. Information about habitation is particularly important in the context of migration since a substantial number of immigrants in the UK tend to live in large groups and, in many cases, in overcrowded habitations and under poor housing conditions. The tables below (5.5 and 5.6) illustrate data gathered for both items.

Table 5.5: *With whom Participants in the UK and in Brazil Reside*

	UK	Brazil
	Number of Participants (% of Sample)	Number of Participants (% of Sample)
Parents	16 (9.8)	72 (44.7)
Partner	78 (47.9)	52 (32.3)
Friends or flatmates	50 (30.7)	10 (6.2)
Other family's member	7 (7.4)	11 (6.8)
Alone	12 (7.4)	6 (9.9)



Table 5.6: *Number of People Residing in the Participants' House across the Sample in the UK and in Brazil*

	<b>UK</b>	<b>Brazil</b>
	<b>Number of Participants (% of Sample)</b>	<b>Number of Participants (% of Sample)</b>
1 to 2 people	75 (46.0)	120 (75.5)
3 to 6 people	66 (40.5)	37 (23.0)
7 to 8 people	14 (8.5)	1 (0.6)
9 people and over	8 (4.9)	1 (0.6)

It is noticeable in Table 5.6 that both samples differ substantially in terms of their living arrangements. While in the UK nearly half of the sample lives with a partner (47.9%), in Brazil most live with their parents (44.7%). A considerable proportion of the sample in the UK also indicated living with friends/flatmates (30.7%), whilst another large proportion of the sample in Brazil indicated living with their partner (32.3%). The difference between samples is represented by the inclination of young adult Brazilians to live in their parents' house until they reach professional and financial security, which usually occurs in their early 30s. The current figure in Brazil is that 25% of the young adult population (aged between 25 to 34 years old) still live with their parents, with males taking longer to leave their parents' house than females (Instituto Brasileiro de Geografia e Estatística, 2013).

Although both samples indicated a large proportion of the participants residing with one to three people and four to six people in the house, the numbers of Brazilians in the UK differed greatly in the proportion of those living with large numbers of people in the same habitation. As indicated above, this feature is commonly observed amongst immigrants in the UK and reflects a dominant theme in the extensive literature on minority ethnic housing experiences in the UK (see Robinson, Reeve & Casey, 2007).

## 5.1 Religion

A significant proportion of both samples indicated that they participated in religious activities, although this proportion was larger amongst Brazilians residing in the UK (40.1%) than for those residing in Brazil (28.0%).

Table 5.7 displays the rate at which those who indicate participation in religious activities attend religious/spiritual services.

Table 5.7: *Frequency of Attendance at a Religious/Spiritual Service for the Sample in the UK and in Brazil*

	<b>UK</b>	<b>Brazil</b>
	<b>Number of Participants (% of Sample)</b>	<b>Number of Participants (% of Sample)</b>
Once a Month	14 (22.6)	14 (29.8)
Twice a Month	6 (3.7)	5 (10.6)
Once a Week	26 (41.9)	13 (27.2)
Twice or More per Week	15 (24.2)	15 (29.8)

Table 5.7 shows that despite the great majority of Brazilians in the UK frequenting a religious service once a week, both samples were similar with regard to the other categories. This suggests that little overlap exists between participants in the UK and in Brazil regarding the frequency with which they attend a religious service.

## 5.2 PATTERNS OF SUBSTANCE USE

Table 5.8 illustrates the frequency with which participants from the UK reported using alcohol or other drugs during the period of one month prior to taking part in the current research. Table 5.9 represents this frequency amongst participants from Brazil.

Table 5.8: *Frequency with which Brazilian Residents in the UK Consumed Alcohol or Other Drugs in the Last Month*

	Number of Participants (% of Sample)			
	Never	Once per Week or Less	More than Once a Week	Most Days of the Week
Alcohol	25 (15.2)	75 (45.7)	52 (31.7)	12 (7.3)
Smoking	117 (71.3)	13 (7.9)	12 (7.3)	22 (13.4)
Cannabis	129 (78.7)	20 (12.2)	9 (5.5)	6 (3.7)
Cocaine	154 (93.9)	8 (4.9)	1 (.06)	1 (.06)
Recreational*	134 (81.7)	23 (14.0)	5 (3.0)	2 (1.2)
Hallucinogens	157 (95.7)	3 (1.8)	3 (1.8)	1 (0.6)
Sedatives	149 (90.9)	14 (8.5)	-	1 (0.6)
Opiates	164 (100)	-	-	-
Other drug	159 (97.0)	2 (1.2)	2 (1.2)	1 (0.6)

*Note.* \*Recreational includes MDMA, ecstasy, amphetamines, inhalants, and BZP.

Table 5.9: *Frequency with which Brazilian Residents in Brazil Consumed Alcohol or Other Drugs in the Last Month*

	Number of participants (% of sample)			
	Never	Once per Week or Less	More than Once a Week	Most Days of the Week
Alcohol	28 (17.4)	77 (47.8)	44 (27.3)	12 (7.5)
Smoking	124 (77.0)	11 (6.8)	7 (3.7)	20 (12.4)
Cannabis	124 (77.0)	19 (11.8)	10 (6.2)	8 (5.0)
Cocaine	157 (97.5)	4 (2.5)	-	-
Recreational*	156 (96.9)	3 (1.9)	-	2 (1.2)
Hallucinogens	156 (96.9)	4 (2.5)	-	-
Sedatives	147 (91.3)	9 (5.6)	3 (1.9)	2 (1.2)
Opiates	159 (98.8)	1 (0.6)	-	1 (0.6)
Other drug	158 (98.1)	1 (0.6)	1 (0.6)	1 (0.6)

*Note.* \*Recreational includes MDMA, ecstasy, amphetamines, inhalants, and BZP.

As illustrated in the tables above, after alcohol and smoking, the most commonly used substance amongst the Brazilian population in the UK was cannabis, recreational drugs, and sedatives respectively. Yet, amongst participants in Brazil the most popular substances were cannabis, sedatives, and recreational drugs respectively.

To identify whether there were significant associations between frequencies of alcohol and drug use across participants according to country of residence, chi-square tests were carried out. To conduct these tests, substances of use were transformed into a tertiary variable based on the following responses: 0 = never used, 1 = used once a week or less, 2 = used more than once a week.

Results indicated a significant association only with the group of recreational drugs ( $\chi^2(3)=19.80, p < .001$ ). Substances in this group (i.e. amphetamines, MDMA, inhalants, and BZP) were used more frequently by Brazilians residing in the UK than those in Brazil.

An additional dichotomous variable was created to identify poly-substance users. Only the frequency in which illicit substances were used was included in this variable. Chi-square tests showed that more participants in the UK than in Brazil are poly-substance users ( $\chi^2(1) = 7.67, p < .05$ ) (26 participants in the UK and 10 participants in Brazil).

#### Gender and Age Differences in the Frequency of Alcohol and Substances Use according to Participants' Country of Residence

To investigate possible differences in alcohol and substance use within each sample group, a log-linear analysis was conducted to examine the effects of gender and age on frequency of alcohol and substance use. Such analyses presented the following results:

- a) *Alcohol drinking*: There were no associations between gender and age groups in the frequency of alcohol use amongst participants in the UK. In Brazil, however, this association was significant, ( $\chi^2(12) = 25.31, p < .05$ ).

Specifically, more female than male participants reported drinking once a week or less. Women from younger age groups were the ones to report lower frequency of alcohol intake more often than comparison groups, however, women in the age group of 26 to 33 years old were more likely to report consumption of alcohol more than once a week. Men in the younger age group (18 to 25 years old) in Brazil were more likely to consume alcohol most days of the week.

- b) *Smoking*: Overall, female participants in Brazil differ from male participants in the number of times per week they smoke ( $\chi^2(3) = 9.23, p < .05$ ). While more men than women reported smoking once a week or less, a lower number of women reported to smoke more than once a week. This difference was particularly noticeable amongst male participants with ages ranging from 18 to 26 years old and women aged between 26 to 33 years old. Such gender and age associations were not found amongst smoker participants in the UK.
- c) *Cannabis use*: A significant association between female and male participants from different age groups regarding cannabis use was only found amongst participants from the Brazil sample ( $\chi^2(12) = 29.23, p < .05$ ). Overall, more women than men smoke once a week or less, whilst more men than women smoke more than once a week. The largest numbers of female and male participants who do smoke are those in the age group of 26 to 33 years old.
- d) *Recreational drug use*: There were significant associations between gender and age groups in the frequency of recreational drugs used amongst participants in the UK ( $\chi^2(12) = 21.58, p < .05$ ). More male than female

participants reported using recreational drugs. Men in the middle age group (26 to 33 years old) were the group reporting consumption of this type of substance most frequently. Although very few participants in Brazil indicated consumption of recreational drugs, there were also some differences regarding the frequency of use between female and male participants from different ages, ( $\chi^2(12) = 23.66, p < .05$ ). Male participants reported using more recreational drugs than female participants, in particular those who men from the young age group.

- e) *Hallucinogens*: The UK's sample reported a significant association between frequency with which males and females from different age groups consumed hallucinogens ( $\chi^2(12) = 27.27, p < .05$ ). Only male participants in the UK reported using hallucinogens. This pattern of male hallucinogen use was higher amongst participants from the younger age group for both low and high frequency of consumption. Such gender and age differences were not found amongst participants in Brazil.

Substances like cocaine, sedatives, and opioids as well as other types of drugs and poly-substance use did not present any significant variation with regards to gender and age group differences within each sample group.

### **5.2.1 Quantity of Alcohol Consumed on a Night Out: Analysis of Differences between the Sample in the UK and the Sample in Brazil**

A one-way between groups analysis of variance (ANOVA) was conducted to investigate differences across country of residence in quantity of alcoholic

beverages usually consumed by participants on a night out. Results showed a significant difference between countries,  $F(1, 320) = 11.30, p < .05$ .

A post-hoc analysis of this result indicated that participants residing in the UK consumed a higher quantity of alcoholic drinks on a night out ( $M = 4.60, SD = 4.57$ ) than those participants in Brazil ( $M = 3.18, SD = 2.76$ ),  $t(267) = 3.38, p < .05$ .

#### Binge Drinking Tendencies According to Participants' Country of Residence

To investigate possible tendencies for binge drinking in the current research population, for the next analysis the average number of drinks consumed on a night out variable was recoded into a categorical variable (i.e. 0 = non drinking, 1 = 1 to 2 drinks, 2 = 3 and more drinks). To identify possible differences between countries of residence and number of drinks by category, chi-square tests were carried out. Results from this analysis revealed a significant association between the categories and country of residence ( $\chi^2(3) = 15.87, p < .05$ ). In particular, more participants in Brazil than in the UK indicated not drinking any alcohol at all when going out, and when drinking, consuming 1 to 2 drinks only. Although both samples were similar with regard to the consumption of 5 to 6 drinks, participants in the UK indicated consumption of a considerably higher amount of drinks when going out in all the subsequent categories (i.e. 7 to 8 drinks, 10 to 11 drinks, 12 to 13 drinks).

To further investigate patterns of binge drinking across the sample in the UK and in Brazil, a chi-square analysis was conducted to examine the effects of gender and age differences. For this analysis, binge drinking status was dichotomised to current binge drinkers versus current non-binge drinkers. As indicated in Chapter 4, Subsection 4.3.3, binge drinking is identified in this study as the consumption of

5 or more drinks on a single occasion for men and 4 or more drinks for women.

Results revealed that more male than female participants are binge drinkers both in the UK sample, ( $\chi^2(1) = 6.15, p < .05$ ) and the Brazil sample, ( $\chi^2(1) = 7.61, p < .05$ ). No associations were found between binge drinking and age groups across countries.

### 5.2.2 Association between Substances of Use

Next, the association between substances of use was explored. For these analyses, variables were derived to indicate concurrent multiple substance use using the binary variables of regular alcohol use, regular smoking, and drug use. Regular drinking was defined as more than one drink per week in the last month. Regular smoking was defined as smoking more than one cigarette per week in the last month, whereas drug use was defined as consuming any other drug (apart from cigarettes and alcohol) on average at least once a month. This resulted in three categories of concurrent substance use: regular drinking and regular smoking, regular drinking and drug use, and regular smoking and drug use. Chi-square analyses were conducted to explore whether these associations would differ according to participants' country of residence.

Results from these analyses revealed that participants from both countries statistically differ only in the concurrent regular drinking and drug use category, ( $\chi^2(1) = 5.51, p < .05$ ). More participants in the UK ( $n = 34$ ) than in Brazil ( $n = 18$ ) reported using alcohol and drugs concurrently.



Gender and Age Group Differences on Concurrent Substance use According toParticipants' Country of Residence

Amongst participants in the UK, there were no statistically significant differences between male and female participants in the three concurrent substance use categories. There was however a significant association between the concurrent variable drinking and drug use and age groups, ( $\chi^2(2) = 8.65, p < .05$ ), where more participants between the ages of 18 to 25 years reported drinking regularly and using drugs ( $n=18$ ) than those participants in the middle age group ( $n=10$ ) and the older age group ( $n=6$ ).

For participants in the Brazil sample, more male ( $n = 12$ ) than female ( $n = 6$ ) participants reported regular drinking and drug use, ( $\chi^2(1) = 5.51, p < .05$ ).

Participants from different age groups revealed significant differences in the regular drinking and regular smoking category, ( $\chi^2(2) = 10.08, p < .05$ ). Specifically, more participants in the middle age group ( $n = 11$ ) and the older age group ( $n = 10$ ) reported regular drinking and regular smoking than those in the younger age group ( $n = 5$ ). Moreover, similar age group differences were also found in the concurrent variable regular smoking and drug use, ( $\chi^2(2) = 8.44, p < .05$ ), where more participants in the middle age group ( $n = 6$ ) and older age group reported being regular smokers and drug users ( $n = 6$ ) than those participants in the younger age group ( $n = 5$ ).

### **5.2.3 Behavioural Outcomes Associated with Substance Use**

Three one-way between groups analysis of variance (ANOVA) tests were conducted to investigate whether there is a difference in how participants of both

countries, gender and age groups would experience negative behavioural outcomes associated with alcohol and substance use. The outcomes and experiences linked to alcohol and substance use was measure by the SACS – Difficulties Subscale. Results show that participants from Brazil and from the UK did not differ significantly in the subscale scores,  $F(1,324) = .83, p=.363$ , indicating that the country in which the data were collected did not affect participants behaviour after consuming alcohol and/or other substances.

There was a significant main effect of gender on this variable,  $F(1,324) = 8.72, p<.05$ . Male participants reported getting involved in more negative behaviours due to alcohol and substance use ( $M=25.84, SD=10.27$ ) than female participants ( $M=22.70, SD=10.67$ ).

The effect of age group on behavioural consequences of alcohol and substance use was also statistically significant,  $F(2,324) = 11.37, p<.001$ . This showed that participants in the younger and middle age groups had very similar scores ( $M=25.08, SD=10.47; M=25.46, SD=10.62$ , respectively) and this was significantly higher than the older age group ( $M=18.86, SD=9.34$ ).

### 5.3 PSYCHOLOGICAL VARIABLES

A series of univariate analyses of variance (ANOVAs) were conducted to investigate country, gender and age group differences in the following psychological variables (dependent variables): levels of resilience, types of personality risk for substance use, different motives for drinking, and positive and negative affect. Furthermore, a binary variable referring to whether the

participant is a substance user or not was created and included in the analyses.

Participants were classified as a substance user on the basis of whether they had reported having consumed alcohol and/or other substances in the last month.

The effect of the following interactions for the dependent variables on each of the psychological variables was also explored: substance use x country of residence, substance use x gender, gender x age group, country of residence x gender, substance use x country of residence x gender. The reason for adding age groups in only one interaction (gender x age groups) is due to the small number of participants that remain in some age group categories. For example, the number of male participants in the middle age group (ages ranging from 26 to 33 years old) that are non-substance users in the UK sample is only one and the number of female participants in the older age group (ages from 34 years old and over) in the UK that do not use substances is only four. Thus, to avoid weak tests of significance, it was decided to limit the number of interactions involving age groups.

Analyses according to each psychological variable are presented below.

### 5.3.1 Resilience

A factorial ANOVA on this data indicated that levels of resilience did not differ across substance using and non-using participants,  $F(1,300) = .28, p = .600$ .

Conversely, there was a significant effect of country of residence on resilience,  $F(1,300) = 14.78, p < .001$ , where participants in Brazil reported having higher levels of resilience ( $M = 71.72, SD = 13.54$ ) than their counterparts in the UK ( $M = 71.39, SD = 1.01$ ).

Gender did not show a significant effect on resilience,  $F(1,300) = .38, p = .537$ , and neither did age groups,  $F(2,300) = .55, p = .578$ . Such results indicate that country of residence is the only variable to have a main effect on how participants experience resilience.

The interactions between variables in the two-way and three-way ANOVAs were non-significant; substance use x country of residence,  $F(1,164) = 2.12, p = .147$ ; substance use x gender,  $F(3,164) = .05, p = .831$ ; gender x age group,  $F(2,164) = .98, p = .378$ ; substance use x country of residence x gender,  $F(1,164) = .05, p = .831$ .

### 5.3.2 Personality Risk Types for Substance Use

The influence of substance use, country of residence, gender, and age groups on each of the four personality risk type subscales were also explored separately.

#### Introversion/Hopelessness Personality Trait

Results from one-way ANOVAs indicated that none of the four categorical variables had a significant effects on this personality trait: substance user,  $F(1, 301) = 1.79, p = .182$ ; country of residence;  $F(1,301) = .66, p = .416$ ; gender,  $F(1,301) = 0.01, p = .925$ ; and age groups  $F(2,301) = 1.34, p = .264$ . There were non-significant effects for the interactions between variables on this subscale.

Although neither of the categorical variables indicated having significant effects on the introversion/hopelessness personality trait, there seems to be a trend for how substance using participants from both countries scored in this subscale. Such a trend is demonstrated in the interaction graphs in Figure 5.1.

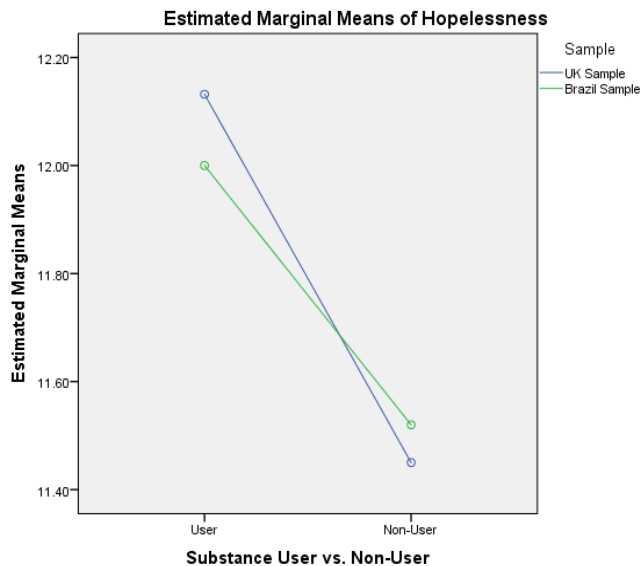


Figure 5.1 *Interaction Graph for the Effect of Substance Using & Non-Using Participants and Country of Residence on Introversion/Hopelessness Personality Trait*

Based on the graphs above, it could be said that substance using participants scored higher on hopelessness than non-substance using participants. This trend was stronger amongst participants in the UK.

#### Anxiety Sensitivity Personality Trait

A one-way ANOVA revealed that levels of anxiety differed significantly across substance users and non-users,  $F(1,301) = 6.24, p < .05$ . In particular, substance using participants reported higher levels of anxiety sensitivity ( $M = 11.58, SD = 3.04$ ) than non-using participants ( $M = 10.49, SD = 3.11$ ).

Country of residence did not have a significant effect on anxiety sensitivity,  $F(1,301) = .24, p = .621$ . Gender on the other hand, revealed an effect on this personality trait,  $F(1,301) = 5.88, p < .001$ , where female participants presented higher scores on this subscale ( $M = 11.80, SD = 3.07$ ) than male participants ( $M = 10.89, SD = .97$ ). Age differences were not associated significantly with anxiety

sensitivity,  $F(2,301) = 2.83, p = .060$ . A significant interaction effect between variables on this personality trait was not found.

#### Sensation Seeking Personality Trait

Results from factorial ANOVAs showed no difference in scores between substance using and no-using participants,  $F(1,301) = 3.69, p = .056$ . Country of residence also had a non-significant effect,  $F(1,301) = .050, p = .478$ , as did age groups,  $F(2,301) = 2.03, p = .134$ .

Gender was the only variable to present a significant result on the sensation seeking personality trait,  $F(1,301) = 14.06, p < .001$ . Independent samples  $t$ -tests showed that male participants ( $M = 13.86, SD = 3.04$ ) are higher in sensation seeking than female participants ( $M = 12.21, SD = 3.19$ ),  $t(257) = -.58, p < .05$ .

#### Impulsivity Personality Trait

None of the following variables indicated an effect on the impulsivity personality trait: substance use,  $F(1,301) = 3.32, p = .069$ ; country of residence,  $F(1,301) = 1.26, p = .263$ ; gender,  $F(1,301) = .01, p = .941$ ; and age groups,  $F(2,301) = .25, p = .777$ . On the other hand, the interaction between gender and age groups presented a significant result,  $F(2,301) = 4.78, p < .05$ , in which female participants in the age group of 26 to 33 years old scored significantly higher ( $M = 12.05, SD = 3.19$ ) than male participants from the same age group ( $M = 9.66, SD = 3.19$ ). However, men in the younger age group ( $M = 11.44, SD = 3.19$ ) and older age group ( $M = 12.01, SD = 3.19$ ) scored higher than women in these two age groups ( $M = 10.53, SD = 3.19$ ;  $M = 10.65, SD = 3.19$ ; younger and older age groups respectively).

Although the variables substance use and country of residence did not present a significant effect on the impulsivity subscale, there is a similar pattern in both variables on this personality trait as shown in Figure 5.2. Impulsivity is higher amongst those participants that are substance users than non-users for both countries, although such levels of impulsivity are even higher amongst those participants in the UK than Brazil.

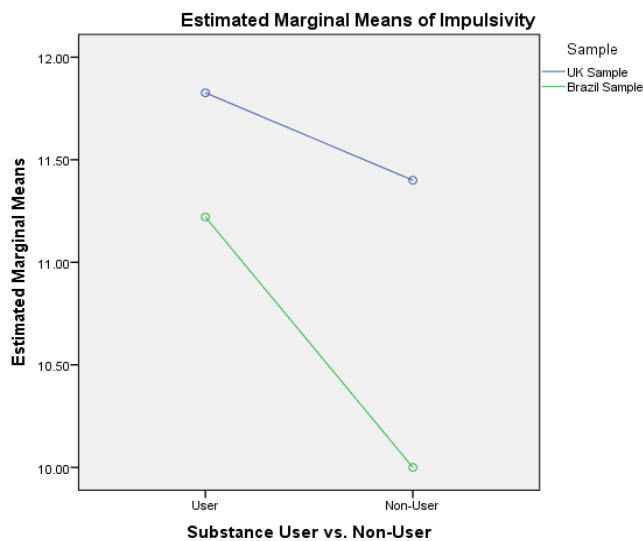


Figure 5.2 *Interaction Graph for the Effect of Substance Using & Non Using Participants and Country of Residence on Impulsivity Personality Trait*

### 5.3.3 Drinking Motives

As only participants who reported consuming alcoholic beverages - and so are substance users - completed the drinking motives questionnaire, the dichotomous categorical variable substance use was excluded from the following factorial ANOVAs. Each of the four drinking motives were explored individually.

Drink Motives for Conformity

Results from one-way ANOVAs revealed that country of residence did not present a significant effect on conformity drinking motives,  $F(1,324) = 1.48, p = .224$ . Gender, presented a significant main effect,  $F(1,324) = 1.80, p < .05$ , with more women ( $M = 35.85, SD = 16.42$ ) than men ( $M = 35.85, SD = 16.42$ ) tending to consume alcohol as a means of achieving conformity. There was not a significant effect of age groups on this subscale's scores,  $F(2,324) = 2.37, p = .095$ . The interactions between the categorical variables were not statistically significant.

Drinking for Social Motives

Again, country of residence did not show a significant effect on this drinking motive either,  $F(1,324) = 2.37, p = .095$ . Gender had a main effect on social motives,  $F(1,324) = 8.95, p < .05$ , where male participants reported being more highly motivated to drink alcohol for social motives ( $M = 15.01, SD = 6.48$ ) than female participants ( $M = 13.18, SD = 6.71$ ).

Age also presented a significant effect,  $F(1,324) = 8.95, p < .05$ . The highest score on this subscale was found amongst participants with ages ranging from 26 to 33 year old ( $M = 14.83, SD = 6.50$ ). The older age group (age 34 and over) presented the lowest scores ( $M = 11.14, SD = 6.40$ ). The difference between the middle age group and the youngest group ( $M = 14.42, SD = 6.60$ ) was not statistically significant,  $t(257) = -.50, p = .615$ .

The two way ANOVA country of residence x gender was not statistically significant,  $F(1,164) = .353, p = .069$ .



Drinking for Coping Motives

Similar to the conformity motives above, country of residence did not show a significant effect on this subscale,  $F(2,324) = 2.66, p = .071$ , whereas gender,  $F(2,324) = 6.10, p < .05$ , and age group did,  $F(2,324) = 7.19, p < .05$ . In line with these results, more male ( $M = 11.20, SD = 5.42$ ) than female participants ( $M = 9.60, SD = 5.51$ ) presented high scores on coping motives for drinking. Moreover, the higher scores in this subscale were found amongst participants with ages ranging from 26 to 33 years old ( $M = 10.93, SD = 5.47$ ). The older age group (age 34 and over) presented the lowest scores ( $M = 8.30, SD = 4.36$ ). The difference between the middle age group and the youngest group ( $M = 10.54, SD = 5.17$ ) was not statistically significant,  $t(257) = -.58, p = .562$ .

The interaction between gender and age indicated a significant effect on drinking for coping motives,  $F(2,324) = 3.34, p < .05$ . Male participants in all age groups presented the higher scores on this subscale compared to female participants of all age groups.

Drinking for Enhancing Motives

Country of residence was not shown to have a significant effect on this drinking motive either,  $F(1,324) = 2.09, p = .150$ . Gender presented a significant effect,  $F(1,324) = 10.53, p < .05$ , in which male participants presented the highest scores in this subscale when compared to female participants

Similar to the other drinking motives subscales, age groups presented significant results,  $F(2,324) = 10.39, p < .001$ , where participants in the middle age group (ages ranging from 26 to 33 years old) showed the highest scores ( $M = 14.38, SD$

=6.40) and the older age group (age 34 and over) presented the lowest ones ( $M = 10.35$ ,  $SD = 5.67$ ). The difference between the middle age group and the youngest group ( $M = 13.68$ ,  $SD = 6.57$ ) was not statistically significant,  $t(257) = -.87$ ,  $p = .386$ .

No significant interaction effects were found between variables on this subscale.

### 5.3.4 Positive and Negative Affect

The possible effects of substance use, country of residence, gender, and age on PANAS were explored separately according to each subscale.

#### Positive Affect

Results showed that there was a non-significant difference between participants who use substances and those who do not use substances on the PA subscale score,  $F(1,301) = 1.01$ ,  $p = .316$ . Country of residence also did not present a main effect on positive affect,  $F(1,301) = .01$ ,  $p = .988$ , and neither gender nor age groups ( $F(1,301)=1.21$ ,  $p=.272$  for gender, and  $F(1,324) = .53$ ,  $p = .589$  for age). The interactions between variables did not have any effect on this subscale either, although there was a trend as illustrated in the Figure 5.3.

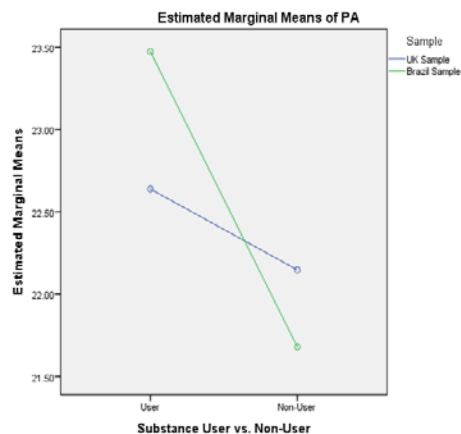


Figure 5.3 *Interaction Graph for the Effect of Substance Use and Country of Residence on Positive Affect*

As illustrated in the figure above, substance using participants from Brazil are higher in levels of positive affect than substance using participants in the UK, whereas amongst non-substance using participants, participants from the UK scored higher than Brazilians on this subscale.

### Negative Affect

Similar to positive affect, none of the following variables had main effects on negative affect either: substance use,  $F(1,301) = 1.61, p = .205$ ; country of residence,  $F(1,301) = .06, p = .802$ ; gender,  $F(1,301) = .84, p = .359$ ; and age,  $F(2,301) = .51, p = .601$ . Results from the interaction between these variables did not show a significant effect, however, non-substance using participants scored higher on this subscale than substance using participants. Furthermore, the UK sample scored higher than the Brazilian sample as is illustrated in Figure 5.4.

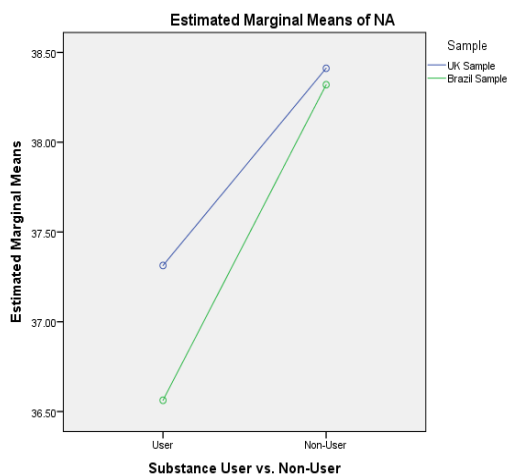


Figure 5.4. *Interaction Graph for the Effect of Substance Use and Country of Residence on Negative Affect*

### **4.3.5 Relationship between Psychological Variables**

Pearson's correlation tests were conducted to explore possible relationships between variables. Given the lack of normality in some of the variables as indicated

in the previous chapter, Subsection 4.4.1, bootstrapped confidence intervals (*BCa 95% Confidence Interval*) were applied to this analysis. Field (2010) claims that when normality is not met amongst some variables, more attention should be given to bootstrapped confidence intervals than the significance *per se*. This is because significant values might be affected by the distribution of scores, whereas bootstrapped confidence intervals will not. Results from this analysis are presented in Table 4.10. All the correlations between related scales and subscales are in bold and marked with the symbol \* (correlations significant at the .05 level) and \*\* (correlations significant at the .001 level). *BCa* 95% confidence intervals are reported in parentheses.

Overall, a large number of the psychological variables are related to each other. The bootstrapped confidence intervals confirmed that there is a genuine effect between the Pearson's correlated variables (e.g. a negative relationship between resilience and introversion/hopelessness personality trait and positive relationship between resilience and positive affect).

Table 4.10: Pearson's Correlation Matrix and BCa 95% confidence intervals for the relationship between the psychological variables

	<b>Introversion/ Hopelessness SURPS ( CI,95%)</b>	<b>Anxiety Sensitiv. SURPS ( CI,95%)</b>	<b>Sensation Seeking SURPS ( CI,95%)</b>	<b>Impulsivity SURPS ( CI,95%)</b>	<b>Conformity DM ( CI,95%)</b>	<b>Social DM ( CI,95%)</b>	<b>Coping DM ( CI,95%)</b>	<b>Enhancing DM ( CI,95%)</b>	<b>Positive Affect PANAS ( CI,95%)</b>	<b>Negative Affect PANAS ( CI,95%)</b>
<b>R</b>	<b>-.51**</b> (-.59 to -.32)	<b>-.03</b> (-.18 to .16)	<b>.09</b> (.00 to .33)	<b>-.12*</b> (-.24 to .15)	<b>-.06</b> (-.21 to .22)	<b>.05</b> (-.01 to .29)	<b>-.04</b> (-.27 to .11)	<b>.05</b> (-.27 to .11)	<b>.37**</b> (.09 to .38)	<b>-.15**</b> (-.37 to .04)
<b>I/H – SURPS</b>	<b>1</b>	<b>.15**</b> (.04 to .26)	<b>-.08</b> (-.18 to .02)	<b>.19**</b> (.08 to .30)	<b>.09</b> (-.02 to .20)	<b>.10</b> (-.00 to .21)	<b>.17**</b> (.05 to .28)	<b>.07</b> (-.04 to .18)	<b>-.43**</b> (-.53 to -.33)	<b>.32**</b> (.21 to .41)
<b>AS - SURPS</b>	<b>-</b>	<b>1</b>	<b>.12*</b> (.02 to .24)	<b>.21**</b> (.07 to .33)	<b>-.04</b> (-.17 to .07)	<b>.05</b> (-.05 to .16)	<b>.09</b> (-.02 to .19)	<b>.06</b> (-.04 to .17)	<b>-.56</b> (-.18 to .06)	<b>.26**</b> (.15 to .37)
<b>SS - SUPRS</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>.18**</b> (.06 to .29)	<b>.07</b> (-.03 to .17)	<b>.16**</b> (.05 to .27)	<b>.03</b> (-.03 to .17)	<b>.16**</b> (.05 to .27)	<b>.04</b> (-.07 to .14)	<b>-.05</b> (-.17 to .07)
<b>IMP - SURPS</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>.26**</b> (.14 to .38)	<b>.18**</b> (.07 to .28)	<b>.21**</b> (.10 to .31)	<b>.16**</b> (.07 to .26)	<b>-.22**</b> (-.33 to -.11)	<b>.34**</b> (.23 to .44)
<b>Conformity DM</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>.37**</b> (.27 to .44)	<b>.37**</b> (.26 to .47)	<b>.33*</b> (.24 to .41)	<b>-.10</b> (-.21 to .02)	<b>.20**</b> (.09 to .30)
<b>Social – DM</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>.72**</b> (.66 to .77)	<b>.88**</b> (.84 to .91)	<b>-.10</b> (-.20 to .03)	<b>.25**</b> (.15 to .36)
<b>Coping - DM</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>.75**</b> (.70 to .79)	<b>-.16**</b> (-.27 to -.05)	<b>.41**</b> (.30 to .49)
<b>Enhancing DM</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-.06</b> (-.17 to .04)	<b>.25**</b> (.14 to .35)
<b>PA - PANAS</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-.16**</b> (.29 to -.04)

#### 4.4 ACCULTURATIVE VARIABLES

To investigate whether participants in the UK that reported using substances did score differently from those who do not use substances in the acculturative scales applied in this study (acculturative strategies and acculturative stress) factorial ANOVAs were carried out. Differences in scores according to gender and age were also explored in these analyses.

Additionally, a second series of one-way ANOVAs was carried out to explore whether length of residence in the UK had an effect on the acculturative strategies and acculturative stress variables for each acculturative variable.

##### 5.4.1 Acculturative Strategies

Results from the first series of factorial ANOVAs, in which substance use, gender, and age groups were the independent variables, revealed that none of these variables had significant effects on any of the four acculturative strategies (integration, assimilation, separation, marginalisation).

Yet, results from one-way ANOVAs in which length of residence is the single independent factor showed to differ across two acculturative strategies, assimilation,  $F(3,161) = .64, p < .05$ , and separation  $F(3,161) = 3.57, p < .05$ . Neither separation acculturative strategy,  $F(3,161) = .12, p = .950$ , nor marginalisation,  $F(3,161) = .24, p = .868$ , showed significant results.

With regard to assimilation acculturative strategy, post hoc comparisons indicated that participants who have lived in the UK for 10 to 14 years were significantly more

associated with Britain ( $M=2.32$ ,  $SD=2.21$ ) than those residing in the UK for less than a ten year period ( $M = 1.09$ ,  $SD = 1.45$  for the category 1 to 4 years and  $M=1.17$ ,  $SD=1.66$  for the category 5 to 9 years). No statistically significant difference was found between participants who were residing in the UK for 15 years ( $M = 2.50$ ,  $SD = 2.01$ ) and any other length of residence category.

Contrary to the assimilation strategy, participants residing in the UK for a period of 10 to 14 years indicated the lowest scores on the separation subscale ( $M = 1.41$ ,  $SD = 1.51$ ). Those residing in the UK for a period of less than ten years scored the highest on this subscale ( $M = 2.98$ ,  $SD = 2.27$  for the category 1 to 4 years, and  $M = 2.97$ ,  $SD = 2.41$  for the category 5 to 9 years). A statistically significant difference was not found between participants who were residing in the UK for 15 years ( $M = 1.90$ ,  $SD = 1.52$ ) and any other length of residence category.

Therefore, results from these analyses suggest that association with British culture tends to increase year by year during the first ten years in the UK and reach the peak during the 10 to 15 year period, while the association with Brazilian culture tends to decrease. It does not necessarily mean however, that the association with Britain will continue to increase after a period of 15 years residing in the UK.

#### **5.4.2 Acculturative Stress**

From the five domains of acculturative stress (discrimination, threat to cultural identity, lack of opportunities, homesickness, and language barriers), substance use had a statistically significant effect only on threat to cultural identity domain,  $F(1,151) = 4.41$ ,  $p < .05$ . Levels of cultural identity threats were higher amongst

substance using participants ( $M = 9.98, SD = 3.38$ ) than non-substance using participants ( $M = 8.27, SD = 2.76$ ). Gender, age groups, and the interaction between categorical variables did not present significant effects in any of the acculturative stress domains.

On the other hand, length of residence indicated a significant effect in two domains of acculturative stress, threat to cultural identity,  $F(3,161) = 2.95, p < .05$ , and stress caused by language barriers,  $F(3,161) = 8.20, p < .001$ . A post hoc analysis indicated that the stress caused by threat to cultural identity was higher amongst those participants who were living in the UK for 15 years or over ( $M = 15.20, SD = 4.82$ ) than those living in Britain for a period of 10 to 14 years ( $M = 10.59, SD = 4.82$ ) and 1 to 4 years ( $M = 10.89, SD = 13.38$ ). There was no significant difference between the 6 to 9 years category ( $M = 11.70, SD = 3.50$ ) and the other categories.

The stress caused by language barriers did differ significantly between those residing in the UK for a period of 1 to 4 years ( $M = 5.68, SD = 1.93$ ), 6 to 9 years ( $M = 4.26, SD = 2.23$ ) and 10 to 14 ( $M = 3.50, SD = 2.20$ ), but no significant difference was found between those newer to the country – 1 to 4 years – and those who were in the UK for the period of 15 years or over ( $M = 5.60, SD = 2.27$ ).

Overall, results indicate that living in the UK for a long period of time increases feelings of, for example, not knowing where the participant belongs or worry about losing their mainstream identifications. Such feelings are even more prevalent in substance using participants. Stress caused by language barriers, on the other hand, tends to decrease with longer length of residence. However, it might be that amongst those participants living in the UK for more than 15 years, the pressure to be fluent in



the English language is causing similar stress to those who hold minimal English proficiency, like the participants that are newer in the UK.

#### **5.4.3 Relationship between Acculturative Variables**

Similar to the procedure conducted to explore the relationships between psychological variables in the section above, Pearson's correlation tests with and BCa 95% Confidence Intervals were conducted to explore the relationship between acculturative variables for the Brazilian sample in the UK. Results from these analyses are presented in Table 5.11.

Both Pearson's correlation tests and bootstrapping CIs show several associations between acculturative strategies and different dimensions of acculturative stress.

#### **5.4.4 Relationship between Acculturative Variables and Psychological variables**

Table 5.12. illustrates the relationship between acculturative variables and psychological variables for the sample in the UK.

Resilience was the only psychological variable not associated with any acculturative variables. Compared with other psychological variables, Positive Affect displayed more significant correlations with acculturative variables including AIHM - Separation, AIHM - Integration, MASS - Lack of Opportunity and MASS - Language Barrier.

Table 4.11: *Pearson's Correlation Matrix and BCa 95% Confidence Intervals for the Relationship between the Acculturative Variables*

	<b>AIHM Separation (CI<sub>95</sub>)</b>	<b>AIHM Integration (CI<sub>95</sub>)</b>	<b>AIHM Marginal (CI<sub>95</sub>)</b>	<b>MASS Discrimin. (CI<sub>95</sub>)</b>	<b>MASS Threat ID (CI<sub>95</sub>)</b>	<b>MASS Lack Opport. (CI<sub>95</sub>)</b>	<b>MASS Homesic. (CI<sub>95</sub>)</b>	<b>MASS Language (CI<sub>95</sub>)</b>
<b>AIHM</b>	<b>-.37**</b>	<b>-.34**</b>	-.14	<b>-.16*</b>	.14	-.17	-.13	<b>-.20**</b>
<b>Assimilat.</b>	(-.47 to -.26.)	(-.46 to -.21)	(-.26 to -.00)	(-.27 to .02)	(-.01 to .29)	(-.29 to -.04)	(-.30 to .05)	(-.36 to -.02)
<b>AIHM</b>	1	<b>-.64**</b>	<b>-.20*</b>	<b>.21**</b>	.00	<b>.36**</b>	<b>.19*</b>	<b>.33**</b>
<b>Separation</b>		(-.73 to -.53)	(-.32 to -.05)	(.05 to .37)	(-.14 to .15)	(.21 to .51)	(.03 to .32)	(.19 to .47)
<b>AIHM</b>	-	1	-.16*	-.15	-.17*	<b>-.26**</b>	-.11	<b>-.16*</b>
<b>Integration</b>			(-.28 to -.04)	(-.29 to -.01)	(-.30 to -.04)	(-.39 to -.12)	(-.27 to .05)	(-.30 to -.02)
<b>AIHM</b>	-	-	1	.12	.13	.05	.45	-.05
<b>Marginal.</b>				(-.03 to .28)	(-.04 to .28)	(-.07 to .17)	(-.11 to .20)	(-.19 to .11)
<b>MASS</b>	-	-	-	1	<b>.33**</b>	<b>.44**</b>	<b>.25**</b>	<b>.29**</b>
<b>Discrim</b>					(.19 to .45)	(.31 to .56)	(.12 to .38)	(.14 to .43)
<b>MASS</b>	-	-	-	-	1	<b>.19*</b>	<b>.17*</b>	-.02
<b>ThreatID</b>						(.00 to .34)	(.01 to .33)	(-.21 to .14)
<b>MASS</b>	-	-	-	-	-	1	<b>.16*</b>	<b>.39**</b>
<b>Lack Opport.</b>							(.01 to .30)	(.23 to .56)
<b>MASS</b>	-	-	-	-	-	-	1	.13
<b>Homesic.)</b>								(-.03 to .27)

Note. \*  $p < .05$ , \*\*  $p < .001$ .

Table 4.12: *Pearson's Correlation Matrix and BCa 95% Confidence Intervals for the Relationship between Psychological and Acculturative Variables*

	Assimilation AIHM (CI <sub>95</sub> )	Separation AIHM (CI <sub>95</sub> )	Integration AIHM (CI <sub>95</sub> )	Marginal. AIHM (CI <sub>95</sub> )	Discrimin. MASS (CI <sub>95</sub> )	Threat ID MASS (CI <sub>95</sub> )	Lack Opport. MASS (CI <sub>95</sub> )	Homesi. MASS (CI <sub>95</sub> )	Language MASS (CI <sub>95</sub> )
<b>Resilience</b>	.04 (-.11 to .19)	.00 (-.13 to .14)	-.02 (-.18 to .13)	-.02 (-.17 to .13)	-.09 (-.24 to .09)	-.01 (-.15 to .13)	-.07 (-.22 to .09)	.00 (-.17 to .17)	-.02 (-.18 to .13)
<b>Introv./Hopel. (SURPS)</b>	.06 (-.08 to .20)	.06 (-.09 to .22)	<b>-.16*</b> (-.29 to -.02)	.11 (-.05 to .26)	<b>.19*</b> (.03 to .34)	.15 (-.01 to .29)	<b>.17*</b> (.00 to .34)	.09 (-.07 to .25)	.10 (-.05 to .26)
<b>Anxiety Sensitiv. (SURPS)</b>	.03 (-.15 to .19)	-.01 (-.16 to .14)	-.12 (-.29 to .04)	<b>.22**</b> (.04 to .38)	.15 (-.00 to .30)	<b>.21**</b> (.07 to .33)	.05 (-.12 to .20)	.10 (.08 to .30)	<b>.19*</b> (.02 to .34)
<b>Impulsivity (SURPS)</b>	-.13 (-.29 to .04)	.08 (-.07 to .23)	.01 (-.15 to .17)	.04 (.12 to .20)	<b>.16*</b> (.02 to .28)	.02 (-.12 to .16)	.10 (-.49 to .26)	.03 (-.15 to .23)	.11 (-.05 to .27)
<b>Sensation Seeking (SURPS)</b>	.05 (-.13 to .23)	<b>-.18*</b> (-.31 to -.04)	.09 (-.07 to .25)	.11 (-.03 to .26)	.02 (-.12 to .17)	.08 (-.09 to .24)	-.01 (-.16 to .14)	-.00 (-.17 to .17)	-.01 (-.23 to .05)
<b>Conformity (DM)</b>	.23 (-.08 to .14)	.04 (-.09 to .18)	-.11 (-.23 to .02)	.11 (-.08 to .29)	<b>.22**</b> (.05 to .39)	<b>.21**</b> (.07 to .34)	.08 (-.07 to .23)	.13 (-.03 to .28)	.10 (-.03 to .23)
<b>Positive Affect (PANAS)</b>	-.09 (-.26 to .08)	<b>-.18*</b> (-.33 to -.02)	<b>.25**</b> (.07 to .42)	.01 (-.15 to .16)	-.07 (-.21 to .06)	-.14 (-.28 to .02)	<b>-.23**</b> (-.39 to -.07)	-.11 (-.28 to .06)	<b>-.02**</b> (-.37 to -.04)
<b>Negative Affect (PANAS)</b>	-.02 (-.17 to .13)	.10 (-.06 to .25)	-.11 (-.26 to .04)	.05 (-.10 to .18)	<b>.20**</b> (.06 to .35)	.15 (-.00 to .29)	.14 (-.02 to .30)	.11 (-.05 to .27)	<b>.16*</b> (.01 to .31)

Note. \*  $p < .05$ , \*\*  $p < .001$ .

## **5.5 BINARY LOGISTIC REGRESSION ON VARIABLES PREDICTING THE TYPE OF SUBSTANCE OF USE**

To assess demographic, psychological, and in the case of Brazilians in the UK acculturation differences for patterns of substance use behaviour, a series of logistic regressions was conducted. These analyses were carried out in three waves. In the first wave, logistic regressions were conducted for the total sample population (Brazil and UK samples combined) to explore whether the demographic variables of country of residence, gender, age groups, and socio-economic status would predict each or multiple substances of use. The socio-economic variable was created based on the job skill level of the participants. For those participants indicating they were students only, parents' job skill level was applied (the higher level between the father and mother). For the second wave of logistic regressions, the total sample was split into two samples according to country of residence. Predictor variables were the demographic variables (age groups and gender) and psychological variables (resilience, types of personality risk for substance use, different motives for drinking, and positive and negative affect). Finally, the last wave of logistic regressions were used to explore whether the acculturation variables (acculturative strategies and stress acculturative domains) would predict patterns of substance use for the Brazilian sample in the UK. The dependent variables – patterns of substance use behaviour – were the binary variables regular drinking, regular smoking, drug use, regular drinking and drug use, regular smoking and other drug use, and regular smoking and regular drinking (information of how these variables were defined is presented in the Subsection 5.5.2 of this chapter). Apart from the binary variables,

binge drinking and poly-substance use were also explored in the subsequent analyses (see Subsection 5.5.1 and 5.5.2 for information of how these variables were defined).

### Wave 1: Demographic Predictors for Individual and Multiple Substance Use

#### Behaviour for the Total Sample

Results from the first wave of logistic regressions are presented in the table 5.13.

**Table 5.13: Demographic risk factors for substance use: Odds ratio (95% CI)**

	<i>Regular Drinking</i>	<i>Binge Drinking</i>	<i>Regular Smoking</i>	<i>Drug Use</i>
<b>Country</b>	.85 (.52-1.40)	.70 (.42-1.15)	.84 (.45-1.54)	.70 (.41-1.20)
<b>Gender</b>	<b>2.26*</b> (1.40 -3.64)	<b>2.33*</b> (1.47-3.77)	1.64 (.92-2.93)	<b>1.97*</b> (1.18-3.30)
<b>Age groups</b>	.87 (.63-1.20)	.83 (.60-1.15)	<b>1.76 *</b> (1.19-2.60)	.89 (.63-1.26)
<b>S.E</b>	1.09 (.86-1.38)	1.03 (.82-1.30)	.85 (.63-1.13)	1.08 (.84-1.39)

	<i>Poly- substance Use</i>	<i>Reg. Drinking &amp; Reg. Smoking</i>	<i>Reg. Drinking &amp; Drug Use</i>	<i>Regular Smoking &amp; Drug Use</i>
<b>Country</b>	<b>.34*</b> (.16-.75)	.74 (.42-1.31)	<b>.44*</b> (.22-.88)	.60 (.28-1.26)
<b>Gender</b>	<b>2.55*</b> (1.23-5.29)	<b>1.98*</b> (1.12-3.49)	<b>2.61*</b> (1.38-4.94)	1.38 (.68-2.82)
<b>Age groups</b>	.62 (1.13-2.40)	<b>.65*</b> (.40- .99)	<b>.63*</b> (.41-.98)	1.39 (.86-2.24)
<b>S.E</b>	.69 (.47-1.01)	1.25 (.92-1.70)	1.25 (.92-1.10)	.90 (.63-2.82)

*Note.* \*  $p < .05$ . For all substances the constructed model fit the data significantly better than the baseline model. Hosmer and Lemeshow (1989) test was non-significant in all constructed models.

As reported in the table above, country of residence was revealed to be a significant predictor for poly-substance use and the concurrent variable drinking and drug use. In both cases, Brazilians in the UK showed higher rates in these multiple substance use variables than their counterparts in Brazil (UK has been coded as 2 and Brazil as

1), with increased odds of 66% and 56% for poly-substance use and regular drinking and drug use, respectively.

Gender proved to be a significant predictor for several patterns of substance use including: regular drinking, binge drinking, drug use, poly-substance use, regular drinking and regular smoking, and regular drinking and drug use. In all of these cases, male participants reported higher rates of substance use than female participants (male participants had been coded as 2 and female as 1). Regression analyses revealed that a decreased in the unit gender results in the ratio odds of using the following substances increasing by 2.26 ( $CI_{95} = 1.40 - 3.64$ ) for regular drinking; 2.33 ( $CI_{95} = 1.47-3.77$ ) for binge drinking; 1.97 ( $CI_{95} = 1.18-3.30$ ) for drug use; 2.55 ( $CI_{95} = 1.23-5.29$ ) for poly-substance use; 1.98 ( $CI_{95} = 1.12-3.49$ ) for regular drinking and regular smoking; and 2.61 ( $CI_{95} = 1.38-4.94$ ) for regular drinking and drug use.

Age groups were a significant predictor of regular smoking, with raised odds of 76% for age increasing. For a decrease in the age group unit, however, odds of regular drinking and drug use increases by 35% and 37% for regular drinking and regular smoking, respectively.

Socio-economic status did not predict any pattern of substance use. Due to this non-significant effect, the socio-economic variable was excluded from the following analyses.

Wave 2: Demographic and Psychological Predictors for Individual and MultipleSubstance Use Behaviour According Country of ResidenceBrazil

From all the psychological predictors included, the sensation seeking personality trait and drinking for social reasons were the two variables to significantly predict the use of substance by participants in Brazil. For example, the concurrent regular drinking and drug use variable increases according to higher levels of sensation seeking ( $OR = 1.41, CI_{95} = 1.11 - 1.80$ ), whereas both regular drinking and binge drinking increase according to higher levels of drinking for social motives ( $OR = 1.25, CI_{95} = 1.08 - 1.45$  and  $OR = 1.22, CI_{95} = 1.07 - 1.40$ , respectively). Gender was also found to be a significant predictor for regular drinking behaviour where the odds of being a regular drinker increases for male participants ( $OR = 2.87, CI_{95} = 1.13 - 7.27$ ). Similar gender patterns were found for the use of other substances ( $OR = 2.14, CI_{95} = 1.03 - 4.42$ ). The variable age groups was shown to significantly predict the concurrent regular drinking and regular smoking variable and poly-substance use. An increase in age predicted regular drinking and regular smoking ( $OR = 3.17, CI_{95} = 1.58 - 6.35$ ), whereas a decrease in age predicted poly-substance use ( $OR = .42, CI_{95} = .21 - .86$ ). Table 5.14 illustrates the results from this wave of regression analyses.

Table 5.14: *Demographic and Psychological Risk Factors for Substance Use for the Sample in Brazil: Odds Ratio (95% CI)*

	<i>Regular Drinking</i>	<i>Binge Drinking</i>	<i>Reg. Drinking &amp; Drug Use</i>	<i>Reg. Drinking &amp; Reg. Smoking</i>	<i>Drug Use</i>	<i>Poly- Substance Use</i>	<i>Regular Smoking</i>	<i>Regular Smoking &amp; Drug Use</i>
<b>Gender</b>	<b>2.87*</b> <b>(1.13-7.27)</b>	1.95 (.75-1.05)	3.62 (.91-14.43)	1.51 (.50-4.56)	<b>2.14*</b> <b>1.03-4.42</b>	2.46 .98-6.17	1.10 .43-2.90	.89 .35-2.21
<b>Age groups</b>	1.12 (.62-2.03)	1.88 (.65-2.17)	1.15 (.47-2.83)	<b>3.17*</b> <b>(1.58-6.35)</b>	.70 .41-1.18	<b>.42*</b> <b>.21-.86</b>	1.20 .50-2.74	.98 .41-1.56
<b>RE</b>	1.05 (.99-1.11)	.95 (.91-1.01)	.99 (.92-1.08)	.99 .94-1.05	.99 .96-1.02	1.02 .98-1.06	1.09 .97-1.01	1.00 .96-1.04
<b>INT/HOP</b>	1.12 (.94-1.35)	1.01 (.83-1.23)	1.09 (.82-1.46)	1.03 (.84-1.27)	1.01 .88-1.16	1.13 .95-1.35	1.22 .94-1.40	1.05 .88-1.27
<b>AS</b>	1.03 (.89-1.20)	.98 (.84-1.15)	1.10 (.86-1.41)	.92 (.77-1.12)	1.13 .99-1.28	1.02 .87-1.19	1.12 .96-1.20	1.04 .88-1.21
<b>SS</b>	1.06 (.93-1.21)	1.06 (.92-1.22)	<b>1.41*</b> <b>(1.11-1.80)</b>	1.14 (.97-1.33)	1.07 .94-1.22	1.03 .87-1.21	1.15 .97-1.38	90 .76-1.06
<b>IMP</b>	1.18 (.97-1.43)	1.04 (.86-1.25)	.94 (.72-1.24)	1.10 (.89-1.36)	.98 .85-1.12	1.00 .84-1.19	.97 .85-1.14	1.13 .95-1.34
<b>PA</b>	.97 (.91-1.04)	1.02 (.95-1.09)	1.08 (.98-1.19)	.98 (.91-1.06)	.88 .50-1.57	.86 .46-1.60	2.65 .63-7.86	1.98 .52-7.48
<b>NA</b>	1.03 (.96-1.10)	.98 (.92-1.05)	.93 (.84-1.02)	1.02 (.94-1.10)	.85 .47-1.53	.87 .47-1.63	2.44 .79-8.95	2.03 .53-7.79
<b>DM Confor</b>	.84 (.70-1.00)	.88 (.74-1.05)	.78 (.58-1.05)	.94 (.77-1.16)				
<b>DM Social</b>	<b>1.25*</b> <b>(1.08-1.45)</b>	<b>1.22*</b> <b>(1.07-1.40)</b>	1.03 (.84-1.27)	1.11 (.95-1.30)				
<b>DM Coping</b>	1.00 (.89-1.13)	1.01 (.89-1.14)	.91 (.75-1.11)	1.07 (.92-1.25)				
<b>DM Enhanc</b>	.96 (.83-1.11)	1.03 (.90-1.18)	1.21 (.96-1.53)	.94 (.79-1.12)				

Note. \*  $p < .05$ . For all substances the constructed model fit the data significantly better than the baseline model. Hosmer and Lemeshow (1989) test was non-significant in all constructed models. N=66



UK

For the UK's sample, the personality traits introversion/hopelessness and anxiety sensitivity significantly predicted patterns of substance use. More precisely, the concurrent regular drinking and regular smoking variable increases more steeply for those scoring higher in levels of introversion/hopelessness ( $OR = 1.41$ ,  $CI_{95} = 1.11 - 1.80$ ), whereas binge drinking increases more steeply for those scoring lower in anxiety sensitivity ( $OR = .87$ ,  $CI_{95} = .76 - .99$ ). Drinking for social motives also predicted binge drinking, and increases in scores on this motive predicted an increase in binge drinking. Drinking for enhancement reasons was another type of drinking motive to have predicted regular drinking ( $OR = 1.23$ ,  $CI_{95} = 1.05 - 1.39$ ), the concurrent variables regular drinking and drug use ( $OR = 1.20$ ,  $CI_{95} = 1.02 - 1.41$ ), and regular drinking and regular smoking ( $OR: 1.28$  %CI: 1.10-1.49). In all these cases, increases in these motives significantly predicted the use of these substances. Gender was a significant predictor of drug use ( $OR = 2.14$ ,  $CI_{95} = 1.03 - 4.42$ ). Table 5.15 illustrates the odds and 95% CI of all the variables explored in these analyses.

Table 5.15: *Demographic and Psychological Risk Factors for Substance Use for the Sample in the UK: Odds Ratio (95% CI)*

	<i>Regular drinking</i>	<i>Binge drinking</i>	<i>Reg. drinking &amp; Drug use</i>	<i>Reg. Drinking &amp; Reg. Smoking</i>	<i>Drug Use</i>	<i>Poly- Substance use</i>	<i>Regular smoking</i>	<i>Regular smoking &amp; Drug use</i>
<b>Gender</b>	1.19 9.52-2.72)	1.72 .78-3.83	1.76 (.65-4.78)	1.15 .46-2.87	<b>2.14*</b> <b>1.03-4.42</b>	2.46 .98-6.17	1.26 .57-2.83	.87 .34-2.22
<b>Age groups</b>	.81 (.44-1.49)	.98 .55-1.73	.64 (.30-1.40)	1.37 .69-2.73	.70 .41-1.18	.42 .21-.86	1.26 .71-2.25	.98 .51-1.90
<b>RE</b>	1.02 (.98-1.05)	.99 .96-1.03	.99 (.95-1.03)	1.02 .98-1.05	.99 .96-1.02	1.02 .98-1.06	1.01 .98-1.05	1.00 .96-1.05
<b>INT/HOP</b>	1.14 (.97-1.34)	1.04 .89-1.22	1.05 (.86-1.27)	<b>1.21*</b> <b>1.00-1.45</b>	1.01 .88-1.16	1.13 .95-1.35	1.15 .98-1.35	1.05 .88-1.27
<b>AS</b>	.97 .85-1.12)	<b>.87*</b> <b>.76-.99</b>	1.17 (.97-1.40)	1.00 .85-1.17	1.13 .99-1.28	1.02 .87-1.19	1.01 .88-1.16	1.04 .88-1.21
<b>SS</b>	1.04 (.88-1.22)	1.03 .88-1.20	.98 (.80-1.19)	1.11 .92-1.34	.98 .85-1.12	1.00 .84-1.19	1.14 .98-1.34	1.13 .95-1.34
<b>IMP</b>	.99 (.85-1.15)	1.06 .92-1.21	1.13 (.93-1.37)	.95 .80-1.13	1.07 .94-1.22	1.03 .87-1.21	.96 .83-1.11	.90 .76-1.06
<b>PA</b>	.87 (.49-1.54)	1.36 .69-2.71	.72 (.36-1.41)	1.93 .56-6.63	.88 .50-1.57	.86 .46-1.60	2.26 .64-7.97	1.98 .52-7.48
<b>NA</b>	.86 .48-1.54	1.30 .65-2.61	.72 (.36-1.44)	2.11 .60-7.38	.85 .47-1.53	.87 .47-1.63	2.40 .67-8.57	2.03 .53-7.79
<b>DM Confor</b>	1.02 .90-1.16	.93 .82-1.06	1.05 (.91-1.20)	1.04 .92-1.18				
<b>DM Social</b>	1.04 .92-1.16	<b>1.13*</b> <b>1.00-1.27</b>	1.15 (.99-1.34)	.90 .79-1.03				
<b>DM Coping</b>	.97 (.86-1.01)	.94 .83-1.06	.91 (.78-1.05)	1.02 .89-1.17				
<b>DM Enhanc</b>	<b>1.23*</b> <b>(1.05-1.39)</b>	1.10 .97-1.26	<b>1.20*</b> <b>(1.02-1.41)</b>	<b>1.28*</b> <b>1.10-1.49)</b>				

Note. \*  $p < .05$ . For all substances the constructed model fit the data significantly better than the baseline model. Hosmer and Lemeshow (1989) test was non-significant in all constructed models. N= 75

Wave 3: Acculturative Predictors for Individual and Multiple Substance Use  
Behaviour for Brazilian Immigrants in the UK

The acculturative stress domain identity threat was the only acculturative variable that significantly predicted patterns of substance use amongst Brazilian immigrants in the UK. The use of other substances increases more steeply for those scoring higher in this acculturative stress, with increased odds of 41%. Furthermore, the concurrent variables regular drinking and drug use, and regular smoking and drug use indicated similar trends where the increase in this domain of acculturative stress significantly predicts the concurrent use of these substances by increasing the odds by 21% and 16% for regular drinking and drug use, and regular smoking and drug use, respectively. Table 4.17 shows the results from this wave of logistic regression analyses.

Table 4.16: *Acculturative Risk Factors for Substance Use for Brazilian Immigrants in the UK: Odds Ratio (95% CI)*

	<i>Regular Drinking</i>	<i>Binge Drinking</i>	<i>Regular Smoking</i>	<i>Drug Use</i>	<i>Poly- Substance Use</i>	<i>Reg. Drinking &amp; Reg. Smoking</i>	<i>Reg. Drinking &amp; Drug Use</i>	<i>Regular Smoking &amp; Drug Use</i>
<b>Integr.</b>	.94 (.68-1.29)	1.15 (.81-1.62)	.97 (.99-.69)	.95 (.67-1.33)	1.14 (.71-1.81)	1.03 (.71-1.50)	1.02 (.69-1.52)	.91 (.59-1.42)
<b>Assim.</b>	1.02 (.73-1.42)	1.38 (.96-1.98)	.38 (1.18-.81)	.86 (.60-1.24)	1.05 (.64-1.72)	1.21 (.83-1.77)	.97 (.64-1.47)	.98 (.63-1.53)
<b>Separat.</b>	.89 (.65-1.22)	1.13 (.81-1.59)	.32 (.83-.57)	.98 (.70-1.36)	1.19 (.75-1.88)	.89 (.61-1.29)	1.05 (.71-1.55)	1.06 (.70-1.62)
<b>Discrim</b>	.97 (.90-1.05)	1.01 (.94-1.09)	.81 (1.01-.92)	.99 (.91-1.07)	.99 (.90-1.09)	1.00 (.91-1.09)	.92 (.84-1.02)	1.00 (.90-1.10)
<b>ID Threat</b>	1.05 (.95-1.17)	.92 (.83-1.02)	.30 (1.07-.94)	<b>1.17*</b> <b>(1.04-1.32)</b>	1.08 (.94-1.24)	1.10 (.98-1.25)	<b>1.20*</b> <b>(1.06-1.37)</b>	<b>1.16*</b> <b>(1.01-1.34)</b>
<b>Lack Opport</b>	1.02 (.93-1.12)	1.07 (.98-1.17)	.28 (1.06-.95)	.99 (.90-1.09)	1.05 (.93-1.19)	1.02 (.92-1.14)	.98 (.887-1.10)	.96 (.84-1.09)
<b>Homesi.</b>	.96 (.84-1.12)	1.14 (.98-1.32)	.28 (1.10-.93)	1.05 (.90-1.23)	1.14 (.93-1.40)	1.13 (.95-1.34)	1.09 (.91-1.31)	1.08 (.88-1.32)
<b>Lang. Barrie</b>	.98 (.83-1.15)	.92 (.78-1.08)	.84 (.98-.81)	1.13 (.95-1.35)	1.06 (.85- 1.31)	.97 (.80-1.17)	1.11 (.91-)1.35	1.07 (.86-1.34)

*Note.* \*  $p < .05$ . For all substances the constructed model fit the data significantly better than the baseline model. Hosmer and Lemeshow (1989) test was non-significant in all constructed models. N=75

## 5.6 AN ACCULTURATIVE MODEL FOR DRUG USE AMONGST BRAZILIAN IMMIGRANTS IN THE UK

As threat to cultural identity was revealed to be a significant predictor for variables involving the use of drugs, a structural model that explains possible relationships between other acculturative variables (i.e. length of residence in the UK and the acculturative strategies integration, assimilation, and separation) was explored in this domain of acculturative stress and the use of other drugs. Due to the limited number of participants that reported scores in the marginalisation acculturative strategy, this variable was not included in the structural model.

The model explored here was based on theoretical assumptions described in Chapter 2. Specifically, there was an exploration of whether length of residence in the UK (measured by years residing in the UK) has a direct effect on drug use. An exploration of whether length of residence has a direct effect on threat to cultural identity and an indirect effect on this acculturative stress domain under the influence of the mediator variables integration, assimilation, and separation, was undertaken. It was also investigated whether the relation between threat to cultural identity and drug use would differ under the effect of these mediators. Direct paths between mediator acculturative strategy variables and drug use was also explored.

Structural Equation Modelling (SEM) was applied to investigate this structural model using the statistic software package Amos. Model fit was evaluated based on two indices: the root mean square error or approximation (RMSA; Steiger & Lind, 1980), a smaller value of this index indicates a closer fit; and the comparative fit index (CFI, Blethler, 1988). Value of the  $CFI \leq .95$  and the  $RMSEA \leq .06$  are considered to reflect excellent fit (Hu & Bentler, 1990).

The final structural model for drug use had strong positive significant indicator variables and positive significant stability effects, with fit statistics indicating that the model proved a good representation of the data:  $\chi^2(4) = 4.59, p = .332, CFI = .99$  and  $RMSEA = .03$ . To graphically display the results of most interest, Figure 5.5 shows only the significant paths of this model and the coefficient estimators.

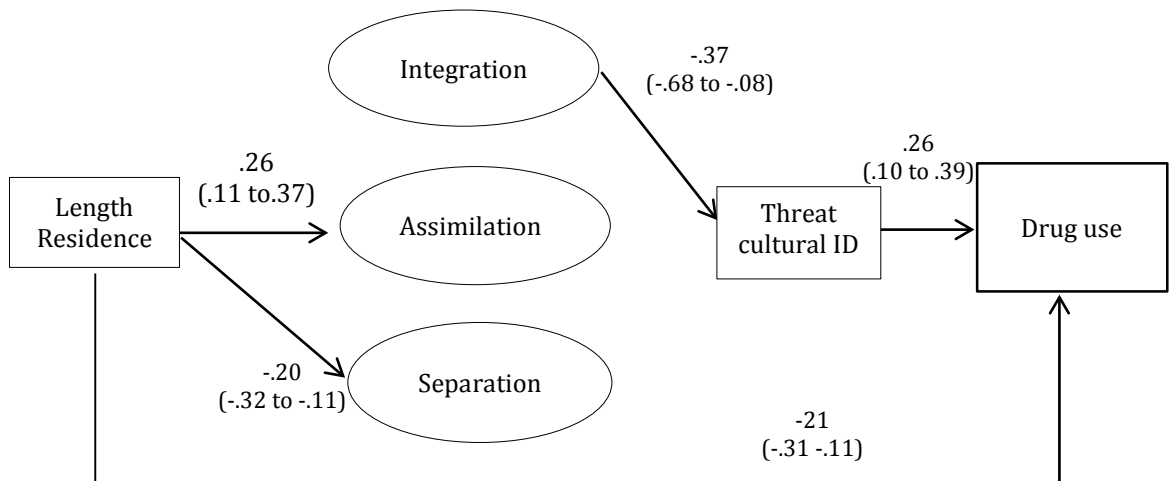


Figure 5.5 *Acculturative Structure Model for Other Drug use, Coefficient Estimator*. Numbers represent structural path coefficients, bootstrapping BCa 90% confidence intervals are in parentheses.

As indicated, the direct path from length of residence and drug use was significant in this structural model ( $b = -.21, BCa_{90\%} = -.31 \text{ to } -.11, p < .05$ ). Two of the three hypothesised mediators between length of residence and threat to cultural identity were shown to be predicted by length of residence (assimilation,  $b = .26, BCa_{90\%} = .11 \text{ to } .37, p < .001$ ; and separation,  $b = -.20, BCa_{90\%} = -.32 \text{ to } -.11, p < .05$ ), although neither of these two variables had a significant effect on threat to cultural identity. The integration variable however, showed a significant effect on threat to cultural identity ( $b = -.37, BCa_{90\%} = -.68 \text{ to } -.08, p < .05$ ), although this acculturative variable did not meet the mediating assumption between length of residence and threat to cultural identity. Identity threat mediated the relationship between integration and

substance use ( $b = .26$ ,  $BCa_{90\%} = .10$  to  $.39$ ,  $p < .001$ ). The direct path from integration to illicit drug use in the structural model was near to zero and not significant ( $b = -.02$ ,  $p = .824$ ) implying full mediation effect of threat to cultural identity in the integration and substance use model.

By analysing the results and coefficients of this structural model it is possible to conclude that length of residence in the UK negatively predicts illicit drug use.

Therefore, the risk for substance use is higher for those newer to the country than those who have been in the UK for a longer period of time. Although length of residence predicts a stronger connection with the British culture (assimilation) and a detachment from the Brazilian culture (separation), it does not predict the integration approach or the stress associated with threat to cultural identity. Instead, levels of integration were shown to be significantly related to threat to cultural identity. In particular, low levels of integration were related to high levels of threat to cultural identity, which in turn mediates a positive relation with other drug use. The path between integration and drug use when mediated by threat to cultural identity presented a slightly larger coefficient than the direct path between length of residence and drug use. An analysis of this structural model to the other substance use variables revealed inappropriate fit indexes: regular drinking,  $\chi^2(4) = 2.68$ ,  $p = .120$ , CFI=.88 and RMSEA = .10; regular smoking,  $\chi^2(4) = 5.87$ ,  $p = .241$ , CFI=.85 and RMSEA = .10; regular drinking and drug use,  $\chi^2(4) = 3.34$ ,  $p = .156$ , CFI=.87 and RMSEA = .11; regular smoking and drug use,  $\chi^2(4) = 2.66$ ,  $p = .120$ , CFI=.87 and RMSEA = .11. Although the variable drug use correlated positively with regular drinking and drug use, and with regular smoking and drug use, the acculturative models for drug use showed inappropriate fit indexes to the other substance use variables. However, an analysis of association between the other two concurrent

substance use variables involving the use of drug (regular drinking & drug use, and regular smoking & drug use) revealed that drug use significantly positively correlates with two concurrent variables: (1) regular drinking & drug use ( $r = .76, p < .001$ ) and (2) regular smoking & drug use ( $r = .54, p < .001$ ).

#### 4.7 SUMMARY OF THE KEY RESULTS

This Chapter started by describing the socio-demographic profile of the sample selected for further quantitative analysis. Overall, the two sub-samples (Brazil and UK samples) share similarities regarding their socio-demographic compositions. It is not to say however, that discrepancies were not found. The sample in the UK for example, hold lower level skill jobs than their counterparts in Brazil and more participants in Brazil are enrolled in undergraduate degree programmes, whereas in the UK sample a more equal distribution of participants across education levels was presented. Because there are cultural differences attached to each country regarding the qualifications involved in each job, stating that the sample in Brazil comes from a higher socio-economic status than their counterparts in the UK would be an unwarranted assumption.

It is important to bear in mind that when exploring this research population, the socio-economic profiles of the Brazilian immigrants in the UK are strongly influenced by the migratory process. Therefore, some differences between groups should be expected. In particular, it has been well established in the current literature that when moving to another country, immigrants are highly predisposed to dropping a social class. Among the reasons for this drop is the participation in low skilled jobs, which very often is a result of language barriers, limited professional networking, and



difficulties validating professional qualifications acquired in the home country in the new one. Another common feature found in many migratory groups in the UK including the Brazilian migratory group is the large number of people living in the same house. Thus, while such characteristics come to support the representativeness of the Brazilian immigrant sample it may also have an influence on the pattern of substance use, and exposure to risk factors when compared to the control sample in Brazil.

### **5.7.1 Patterns of Alcohol and Substance Use**

These preliminary analyses have confirmed that there are some differences and similarities in patterns of substance use across Brazilians residing in Brazil and those in the UK. Specifically, there was a trend for Brazilians in the UK to report using the majority of the substances slightly more often, although statistical results revealed a significant difference only in the use of recreational drugs (i.e. MDMA, ecstasy, amphetamines). A significant difference was also found amongst poly-substance users in which more participants in the UK than in Brazil revealed use of multiple substances. These findings are particularly relevant in terms of understanding the preferential substances of use of this research population, the development of substance use problems, as well as providing additional information on how the experience of living in the UK might influence the type and pattern of substance use. Furthermore, there were clearly observable differences between gender and age groups for certain types of substances. Specifically, gender and age groups were shown to differ in frequency of alcohol intake, smoking, and cannabis use for Brazilians in Brazil, but not for Brazilians in the UK. Overall, female participants in Brazil between the ages of 26 and 33 years old reported using all these three

substances more times per week than female participants from the other age groups and, apart from cannabis, for the male participants too. On the other hand, male participants in the younger age group were the category reporting high frequency of alcohol drinking and smoking. In the UK the frequency of recreational drugs and hallucinogens was shown to differ significantly among age and gender groups. Male participants predominately used more of these two types of substances than female participants, in particular those men from the younger age group.

Evidence strongly suggests that binge drinking occurs more often in the UK than in Brazil, although it is a drinking behaviour very popular amongst male participants from both countries of residence. Another significant difference between countries of residence refers to the high number of participants in the UK reporting to be regular drinkers and other drug users concurrently. Participants from younger age groups in the UK sample featuring most highly were in this concurrent variable. In Brazil there was clearer evidence of age and gender group differences with regard to all variables of concurrent substances of use.

Finally, there were no main differences in the behavioural effects of being under the influence of alcohol and other drugs between participants from both samples.

However, male participants overall reported getting involved in more destructive behaviours than female participants as well as younger participants.

### **5.7.2 The Prevalence of Psychological Variables**

Overall, there were only a few differences between participants according to country of residence on the total scores of psychological variables. Level of resilience for example was the only variable to differ significantly between countries, with higher

scores amongst participants in Brazil. Although the personality traits introversion/hopelessness and impulsivity did not present statistically significant results between countries of residence a trend that was found in these two variables. Levels of both introversion/hopelessness and impulsivity were higher in the UK sample compared to the Brazil sample, whilst in both countries levels of these two personality traits were higher amongst substance using participants. Anxiety sensitivity was another personality trait that was revealed to be much higher in substance users than non-users. Positive and negative affect showed some trends between country of residence and substance use status. For example, while participants in Brazil that use substances scored higher in positive affect than non-substance use participants, in the UK non-substance using participants scored higher on this variable. In line with this, substance users from both countries scored lower in negative affect than non-substance use participants, with higher scores amongst participants in the UK.

A main effect of gender and age groups was also found in a few other variables. More women than men revealed high levels of anxiety personality trait, whilst more males than females reported high levels of the sensation seeking personality trait. Another significant gender difference was found in all the drinking motives. While drinking motives for conformity was highly prevalent amongst females, drinking for coping, social, and enhancement motives were significantly higher amongst male participants from both countries. Social, coping, and enhancement drinking motives were significantly higher amongst participants between ages of 26 and 36 year of age.

### 5.7.3 The Prevalence of Acculturative Variables

An indication that substance using participants were tending to score higher in a particular acculturative strategy was not found in either participant gender or age groups. Length of residence in the UK, which was measured by years residing in the UK, was revealed to have an effect on the assimilation and separation acculturation approach. In particular, results suggest that association with British culture tends to increase year by year during the first 10 years in the UK and reach its peak during the 10 to 15 year period, while the association with Brazilian culture tends to decrease during this period. It does not necessarily mean however, that the association with Britain will continue to increase after a period of 15 years. There is no indication that integration acculturative strategy - the association with both countries - is affected by length of residence in the UK.

With respect to the stress caused by the acculturative process, length of residence was shown to have an effect on the stress domain threat to cultural identity and language barriers. Results propose that living in the UK for a longer period of time increases feelings of worry and threat of losing or not having a cultural identity. Such feelings are even more prevalent in substance using participants. Stress caused by language barriers on the other hand, tend to decrease with increase in length of residence, however, after living in the UK for more than 15 years it seems that the pressure to be fluent in the English language causes similar stress to those participants who are newer in the UK.

A significant association was found between the majority of the acculturative variables. Yet, between acculturative and psychological variables, positive affect

presented the most significant associations, whereas resilience was the only variable to not present any significant association with acculturative factors.

#### **5.7.4 Predictor Factors for Alcohol and Substance Use**

By exploring socio-demographic predictors in the total sample population, findings showed that living in the UK was associated with increased risk of multiple substance use (i.e. poly-substance use and regular drinking & other drug use). Conversely, country of residence did not predict regular drinking, binge drinking, regular smoking, drug use, and regular smoking and drug use. Furthermore, it was found that males are more likely than females to use alcohol in risky ways (i.e. binge drinking), to drink regularly, to use other drugs, and be at risk of multiple substance use. Young participants are more likely to be involved in the frequent use of alcohol and other drugs and alcohol and smoking, whereas participants in older age groups were involved in smoking alone. Socio-economic status was not shown to be a significant predictor for any pattern of substance use.

In the UK and Brazil samples, when analysed separately and compared with one another, there were some discrepancies and similarities. The main differences presented was the increased risk of substance use for those participants in the UK prone to introversion/hopelessness and anxiety sensitivity, as well as the significant effect that enhancement drinking motives has on drinking behaviours in the UK sample. The two predictor factors shared by both samples were drinking for social motives and gender differences. However, for the sample in Brazil social motives predicted both regular drinking and binge drinking, whilst in the UK drinking motives only predicted binge drinking. In both countries it was found that males are more

likely than females to use other drugs. The personality trait sensation seeking was a significant predictor for the concurrent use of alcohol and other drugs in the Brazil sample only. The following psychological factors did not predict patterns of substance use in Brazilians in the UK or Brazilians in Brazil: resilience, impulsivity, positive and negative affect, and motivations for drinking that are rooted in conformity and coping.

The acculturative stress domain threat to cultural identity was the single acculturative variable to predict the use of illicit drugs and the concurrent amongst the Brazilian immigrant sample in the UK. Results show that the uncertainties caused by not knowing which culture the immigrant belongs to or by possible concerns of losing connection with the Brazilian culture might have a direct effect on patterns of substance use in this population.

Lastly, because threat to cultural identity was shown to be a significant predictor of substance use amongst Brazilian immigrants in the UK, a further analysis was carried out to explore an acculturative model for substance use with threat to cultural identity playing a mediator role. Results showed that the relationship between the acculturative integration strategy and substance use is mediated fully by threat to cultural identity. Specifically, low levels of integration were indicated to be related to high levels of this acculturative stress domain, which in turn is related to other drug use. Additionally, this structural model indicated that length of residence also tended to predict the use of other drugs, as immigrants newer to the UK are at higher risk for using substances, however, the integration indirect path showed a slightly larger effect on substance use than years of residence. Although the variable drug use showed to correlate positively with regular drinking and drug use and regular

smoking and drug use, the acculturative models for drug use showed inappropriate fit indexes to the other substance use variables.

## **CHAPTER 6 ANALYSIS OF QUALITATIVE DATA**

The previous two chapters outlined the quantitative elements of the present research. This chapter focuses on analysing the qualitative data, which was gathered through semi-structured interviews and a focus group session. Thematic Analysis was used to analyse the data; however, prior to presenting the themes which emerged from this analysis, a detailed description of the procedures followed will be described.

As indicated in Chapter 4, Section 4.4, the main purpose of the semi-structured interviews was to explore in-depth complex issues related to social and cultural factors that underlie the susceptibility of Brazilian immigrants to use alcohol and other drugs. The intention was to gather data that would either support or challenge the quantitative findings, as well as allow elaboration of these findings and how the process of adapting to British society impacts patterns of substance use. Interviews were conducted with a sample of Brazilian immigrants in the UK and a sample in Brazil to gain insight into possible similarities and differences in predictors of substance use according to country of residence. In addition, a focus group session was conducted with a group of Brazilians living in the UK for less than one year. The aim of this focus group was to establish the initial barriers and cultural pressures experienced by Brazilians on their arrival in the UK.



## **6.1 ANALYSIS PLAN AND PREPARATION**

### **6.1.1 Analytical approach**

Thematic Analysis (TA) was chosen for this study based on its methods for identifying, analysing, and reporting patterns (themes) within data, without requiring specific theoretical and technological knowledge of qualitative approaches (Braun & Clarke, 2006). Through this theoretical freedom of organising and describing data in detail, TA offers to this study a rich, detailed and complex account of the data.

Thematic analysis also offers ways for researchers to make sense of a wide variety of information in a systematic manner that increases their accuracy or sensitivity in understanding a particular phenomenon (Fereday & Cochrane, 2006). Through the systematisation of the information, TA can also increase the researchers' ability to communicate their observations, findings, and interpretations of meanings (Boyatzis, 1998), which in turn can lead to a more comprehensive understanding of the phenomenon. Although there is not a clear agreement of what TA is, and no concise guidelines of how to use it, TA is broadly understood by its process of encoding qualitative information. Coffey and Atkinson (1996) describe this process as a means of relating the data to the ideas of these data. The authors' argument lies in the procedures of recognising (seeing) an important fact through coding and encoding it (seeing it as something) prior to a process of interpretation. By encoding information, the data is formally organised for the identification and development of themes.

Themes, on the other hand, are patterns of information that are described and organised at a minimum level and, at the same time, features of the phenomenon are interpreted at a maximum level (Boyatzis, 1998). The recognition of themes will depend on the analytical plan of each research study.

An important aspect of the analytical approach of current study is the essentialist paradigm used to conceptualize meaning. According to Braun and Clarke (2006) the essentialist approach allows individual psychologies involved in the experience to be explored through a focus on language. It is assumed that through language individuals can articulate both experience and meaning (Gues, MacQueen, Namey, & 2012). Thus, by exploring the relationship between language, experience, and meaning it is possible to theorize patterns of significance across the data.

In the current study, the extent to which these patterns of significance appeared across the data led to the development of themes. However, no 'hard-and-fast' rules were applied relating to what proportion of the data set needed to be displayed for it to be considered a theme. As described by Braun and Clarke (2006), TA offers a very flexible approach in which the 'keyness' of a theme does not necessarily depend on prevalence but can instead be determined by its relevance to the research questions and by researcher judgment. In line with Braun and Clarke (2006), the inclusion of a theme in this study was also based on the researcher's judgment of its relevance to the research aim.

### **6.1.2 Stages of analysis**

The familiarisation of the researcher with the qualitative data began during transcription of the audio recordings into written form (Guest, MacQueen & Namey, 2012). However, initial analytic interests started to emerge only during the repeated reading stage when notes and ideas for coding started to arise. Based on the latter, the researcher developed an initial list of ideas about what was in the data and what was of interest here.

The next stage involved the production of codes. As described by Boyatzis (1998, pp. 63) codes refer to *'the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon.'* Broadly speaking, the process of coding involves capturing features of the data that are of interest to the researcher and are salient to the research question, and organising these features into meaningful groups. Thus, groups are created by in-depth investigation of specific instances of meaning which exist throughout the dataset.

A structured group of codes including information about the meaning of the codes was then created in the form of a codebook (Saldana, 2009) (see Appendix 9 for a short example of the codebook). The adoption of a codebook as a component of this qualitative analysis had two main objectives; the first was to provide a transparent procedure and an effective baseline for moving the analysis beyond description to an explanatory level, whilst the second was to offer a visual representation of how the analytical process shifts from Portuguese (participants' language) to English by including examples of quotes in both languages. Thus, in addition to providing a clear description of how the data has been coded, the codebook also represents how the analytic journey (in English) connects to the raw data (in Portuguese).

The following stage involved reading the segments included in each code (Guess, MacQueen, & Namey, 2012). Attempts were made to find a connection and a balance between theoretical concepts and interpretation, and a preservation of the particularity of what was being said. The next steps were more interpretative and involved analysing and exploring connections between concepts across the two samples (UK and Brazil) and documenting key themes, actions, their origins, and consequences. From this process, concepts were clustered into related groups and

then in possible candidate themes. Two processes of reviewing and refining themes recommended by Braun and Clarke (2006) were then conducted. The first involved an in-depth analysis of whether the extracts of each theme form a coherent pattern. This was conducted by reading all the coded data extracts for each theme. Also at this phase, became clear that some candidate themes should be discarded from the analysis due to the lack of data to support them or data that were too diverse. The second level involved a similar process of analysis, however, at this stage the relevance of each theme was reviewed in relation to the data set as a whole. The purpose here was to ascertain whether the themes did fit in the data set. In addition, because coding is an ongoing interactive process, the process of re-reading the data set enabled the coding of additional data within themes that were missed in earlier coding stages.

Themes consolidated from the above process were then defined and further refined by identifying what each theme was capturing and how little overlap it had with other themes. This was conducted by writing a 'story' reflecting what each theme was about and how it fitted in the research questions. It was also during this refinement process that sub-themes were identified and were adopted to give a structure to each theme.

### **6.1.3 Reflexivity**

As the researcher is a Brazilian immigrant in the UK herself, attention was given to the potential influence of her own views and experiences when analysing the data. The researcher was also aware that her knowledge of prior research through the literature review in Chapters 1 and 2, as well as knowledge of results revealed in the previous quantitative phase (Chapter 6) may have an impact on interpretation of the data. She attempted to 'bracket off' these assumptions by trying to immerse herself in

the interviewee's world as best as possible. She also carefully followed guidelines throughout the research process (Appendix 11) to meet the respective evaluative constructs recommended by Lincon and Guba (1985): *credibility*, *transferability*, *dependability*, and *conformability*. By following this approach, potential biases were minimised.

## 6.2 THEMES

The following describes the main themes which emerged from analysis of participants' interviews and the focus group on social and psychological constructs, and the experiences that might predict or protect against substance use in Brazilians in the UK, as well as in Brazil. These views are organised into five main themes. These and their sub-themes are listed in Table 7.1 and are outlined in detail below. Extracts from participants' writing have been used extensively to illustrate the themes. Convergence and deviation from extant theory and literature, and the implications for future theory, research, and practice are discussed in Chapter 7.

Table 6.1: *Themes and Sub-themes from the Qualitative Analysis*

Themes	Sub-themes	Definition
<b>1. THE BRAZILIAN IMMIGRATION EXPERIENCE IN THE UK</b>	Reasons for coming to the UK	Reasons for immigrating to the UK, gains versus need.
	Being an immigrant in the UK	Description of the difficulties of being an immigrant in the UK; positive and negative views of being a Brazilian immigrant.
	The Brazilian community	Description of how the participants see the Brazilian community in the UK.
	Phases & Difficulties involved in the adaptation to the UK	Reports about the arrival and adaptation phases in the UK, and bureaucratic and emotional difficulties.
	Cultural identification	Cultural identification with Britain and Brazil.
<b>2. PATTERNS OF SUBSTANCE USE AMONGST BRAZILIANS IN THE UK</b>	Contact with British culture	Information about the level in which participants have contact with British culture, the people, and system.
	Getting into substances	Reports on how substance-use participants began to use substances.
	Reasons for using substances	The main reasons for using substances.
	Trends in use	Changes in trends of using substances after immigrating to the UK.
	Set & Setting involved in substance use	Information about the set and setting involved in substance use according to type of substance.
	Normative beliefs	Strong sense of normality about drug use in the British society.
	Thoughts about substance use behaviours	The high prevalence of self-control mechanisms and low vulnerability to substance dependence.

<b>3. PATTERNS OF SUBSTANCE USE AMONGST BRAZILIANS IN BRAZIL</b>	Getting into substances	Reports on how substance-use participants began to use substances.
	Reasons for using substances	The main reasons for using substances.
	Trends in use	Types of substance use.
	Set & Setting involved in substance use	Information about the set and setting involved in substance use according to type of substance.
	Stigma to drug use	Stigma regarding drug use in Brazil.
	Thoughts about their substance use behaviour	The high prevalence of self-control mechanisms and low vulnerability to substance dependence.
<b>4. CROSS-NATIONAL COMPARISON: INDIVIDUAL CHARACTERISTICS</b>	Description of the self	Individual characteristics and personality traits.
	Lifestyle	Lifestyle preferences in terms of group of friends, interests, and leisure activities.
	Coping mechanisms	Ways of dealing with difficulties in life.
	Strains growing up	Indication of difficulties while growing up.
	Description of the parents	Broad information about the parents including parent style.
<b>5. CROSS-NATIONAL COMPARISON: PROTECTIVE FACTORS</b>	Health & Sports	Concerns about the consequences of substance use on health, and engagement in sport activities delayed the age of substance use onset.
	Spirituality	The presence of God and spiritual powers in participant's life.
	Financial reasons	The high cost involved in using substances.
	Negative outcomes	The negative emotional and body sensations experienced when using substances and possible contributors to the development of negative expectancies.

### 6.3.1 THEME 1: THE BRAZILIAN IMMIGRATION EXPERIENCE IN THE UK

The first theme focuses only on the UK sample and describes aspects relating to the migratory process to Britain in terms of participants' motivations for moving to the UK and the psychological, social and cultural transformations that might have shaped their experiences as a Brazilian immigrant in the UK. The interpretative analysis revealed that some aspects of the migratory journey were seen more positively by some participants than for others according to substance use status (substance user and substance non-user). For example, substance using participants seemed to adopt a more positive approach about the overall experience of being an immigrant in the UK, although psychological distress caused by having to deal with more than one set of cultural identifications and values were also evident in substance using participants. A set of reasons for migrating to the UK were described by participants, and these were broadly clustered into two major groups: (1) a group of 'gain' reasons; and (2) a group of 'need' reasons. Substance using and non-using participants were found to differ in their reasons for coming to the UK, in relation to these two groups of reasons. In addition, the majority of participants were found to have limited contact with British people, the culture, and the system.

#### Reasons for coming to the UK

The decision for immigrating to the UK was influenced by a number of reasons. Among the most cited were, a desire to 'see the world'; a way of enjoying life; seeking cultural enrichment; learning the English language; escaping from problems in Brazil; and economic motivations. However, by exploring participants' stories it seems that reasons are clustered into two broad groups. One group of reasons seem to be



associated with aspects of gaining, in terms of coming to the UK as a form of acquiring experiences, knowledge, and cultural enrichment.

*When you are young there is a strong desire to see something different. This feeling has intensified in me when I joined the Navy. There is a feeling of grubbing in the Navy, feeling of discovering new places. It was then when I decided to come to the UK for a year. (Julio, substance user)*

Douglas, a substance using participant, described his main reason for coming to the UK as 'A curiosity in exploring the world'. Yet, the other group of reasons for coming to the UK seem to reflect an issue of necessity rather than individual choice or desire.

*I left Brazil with the intention of staying in here for two years and to help my parents to refurbish their house... I did help them. I did, but not much. More or less, I helped them. (Carla, non-substance user)*

By analysing the substance use status of participants, it was evident that substance using participants' reasons for coming to the UK tended to be associated with aspects of gaining, whereas non-substance using participants' reasons for coming to the UK were mainly associated with aspects of necessity such as economic reasons and escaping problems in Brazil. This pattern was also evident in the comments about reasons for choosing the UK as a migratory destination rather than other countries such as the US, which remains the main destination for Brazilian immigrants.

*I never liked the US, I do not like their culture, their lifestyle. I prefer Europe. I was interested in the history of art, I wanted to go to art galleries as the main galleries that I knew were in Europe. I was interested in the culture. (Patricia, substance user)*

### Being an immigrant in the UK

Participants described the complex and hard work they have experienced, and in some cases still experience, as an immigrant in the UK. All participants expressed

some kind of difficulty associated with the migratory condition. For some participants being an immigrant was associated with feelings of loneliness and discrimination. Lack of opportunities were also described as a link to the migratory status in the UK. Some participants however, assumed a more positive view about their status as an immigrant. Such positive views were expressed only by substance using participants.

*I never experienced any kind of discrimination against me. To be honest, sometimes it was even an advantage. To be a foreigner has its advantages sometimes as people look at us as we can see things from a different perspective, a little wider. I used to work in an international association. I was a manager and I was well seen as foreign. (Douglas, substance user)*

Meanwhile, the more negative views about being an immigrant in the UK were expressed by non-substance using participants.

*This place here is for English people. Any other race in here is just like me. I don't see differences. My life is completely different from an English person when it comes to benefits or when it comes to quality of services available. (Carla, non-substance user).*

### The Brazilian community

A strong sense of distress was disclosed by participants when describing the Brazilian community in the UK. Most participants stated that a large majority of Brazilian immigrants are narrow-minded and do little to improve their lives in the UK. Furthermore, there was a sense of great disappointment in relation to friendships and trustworthiness among Brazilian immigrants. It seemed that for the majority of participants, the experience they had with Brazilians in the UK was very different to the experience they had with their counterparts in Brazil.

*Let me tell you something, I've never had so many disappointments in my entire life as I had in London. Never. My best friend left me out in the streets only with my bags. I had a girlfriend that cheated on me twice. Had another girlfriend that after we split she was desperate for us to get back, but suddenly she was with someone else. People here do not know what they want. They completely lose the sense of who they are. I think they develop the idea of 'London', which gives them a sense of freedom. Very often they get confused with this sense of freedom.  
(Eduardo, non-substance user)*

Douglas explored reasons that might prevent Brazilian immigrants from progressing in the UK. The participant cited that the dearth of information presented to the Brazilian community is a major cause for lack of social mobility amongst Brazilian immigrants.

*I think the lack of mobility amongst the Brazilians in the UK is related to lack of information. This lack of information comes from multiple angles, right? It might come from the person perspective and the persons try to get information on its own, however, that does not mean the person is getting the correct type of information. There is a lot of 'I THINK' in the Brazilians' head instead of right and legal information. I find it hard to describe that, but although I never lived in the Brazilian community here, I feel that many of the Brazilian people live in closed communities, which often is illustrated by the lack of information. These people are very oppressed, very oppressed people, right? Consequently they are afraid to do some things, they are afraid of going to some places, and they are often closely related to people that are illegal here. These illegal people are treated as criminals and they should not be treated in the way they are. Very often lack of information and also misinformation are given to them even on purpose. (Douglas, substance user)*

Luisa, who has lived and worked as a cleaner in the UK for five years, does not speak the English language yet. Although she emphasizes that Brazilians in the UK are not people to have as friends, she did describe the feeling of welcome that she found in the community.

*I might regret getting involved only with the Brazilian circle in here. I may have wasted the opportunity to be talking today a little bit of Italian, Russian, French. I love French. But as I always say, everything in life is based on choices. Maybe I am regretting already. If I had endured the humiliation that I've experienced in the first few months that I got here, maybe I would have met people from other races, other ethnicities rather than Brazilians. Because I preferred to not be humiliated and to walk with my own legs, I felt very welcomed in the Brazilian circle.*  
(Luisa, non-substance user)

### Phases & difficulties involved in the adaptation to the UK

Two phases involved in the participants' migratory experience were described. The first was the arrival phase, which some participants described as a cultural shock, whilst others described it as a feeling of excitement. The second phase was the process of adaption to the new country and lifestyle. This adaptation process seems to happen three to six months after arrival.

*The adaptation process to the UK was something very intimate. Suddenly, when I started to feel more comfortable in here I also started to notice that the difference between me and other people was just in the language. Even the food wasn't that much different anymore.*  
(Karen, non substance user, focus group)

This personal experience involved in the initial adaptation process mentioned by Karen highlights the individualities attached to each participant experience. For example, for some participants this experience went smoothly,

*I never suffered any pressure in adapting here. Many people say that it was difficult in the beginning, but this never happened to me. At the beginning is everything new. You start to discover all this new things and then after come the stage of starting to learn English. This was very exciting for me. I never suffered in any phase of adaptation.*  
(Julio, substance user)

whereas for other participants the initial adaptation process was regarded as one of the most difficult periods in the UK.

*The most difficult part is the first six months as it is when you decide if will stay or will go back.* (Michael, substance user)

Overall, the main difficulties expressed by participants' were about bureaucracies regarding immigration policies and rules, and emotional difficulties such as feelings of loneliness. Whilst difficulties associated with immigration bureaucracies were associated mostly with substance using participants, emotional difficulties were more prevalent among non-substance users.

*The difficult that make me very sad is not having anybody in here. For example, I don't have a family in here, no friends. You know friendship is something very difficult to be developed in here. Everybody is searching for something that is not friendship. (Eduardo, non-substance user)*

### Cultural identification

A direct cultural identification with Britain was not mentioned by any of the participants. Ivo however, was the only participant to identify himself with one aspect of Britain, 'I do not consider myself as a British, but I do as a Londoner'. When asking participants about how they would describe themselves in terms of cultural identity, a few participants described themselves as feeling Brazilian. These participants were specifically non-substance users. There were however, comments of a connection with Brazil and its culture by the majority of participants. For those participants who use substances a sense of awareness relating to more than one cultural identity was highlighted.

*I used to live like this in the past: From the main door to inside of my house I lived in Brazil and from outside of my house door I lived in England. Today I see this: I live in England, I do not live in Brazil. Brazil is my country, my heart is Brazilian but my home is here today, I live in here. (Michael, substance user)*

This awareness about dealing with more than one set of cultural values and norms was experienced by some participants as positive and by others as negative. The

positive aspect was indicated by long-term plans of going back to Brazil or continuing to live in the UK but with strong ties to Brazil; and the negative aspect was indicated by great feelings of confusion.

*I suffer a lot with this roller coaster of feelings. Each new phase is an emotional roller coaster. It is always the same story: to where should I go and what should I do? As I told you, I am experiencing identity crisis at this moment because I don't know where is home. When I am in Brazil I miss here. When I'm here I wish to go to Brazil. I already thought about moving to Italy or to the US. I live in this constantly emotional roller coaster. (Julio, substance user)*

Julio talks further about the type of feelings this 'emotional roller coaster' brings to him.

*This brings agony because I do not know what goes to happen in the next ten years. We do make plan and go to sleep with this plan, but then we wake up with another plan. It is difficult. (Julio, substance user)*

#### Contact with British culture

Apart from two participants, contact with British people and the British culture was not experienced much overall.

*I don't have an English friend and I don't know many. Perhaps this is one of my biggest mistakes in here. Until today, I don't speak English. (Patrick, non-substance user)*

In a few cases, hostility towards British people was also highlighted.

*I don't usually like British people. I do hold some kind of racism against British people. I know it is horrible for me to say that as I live in England, but I don't like them. I think I hold certain feeling of anger related to them. I think they are very empty people. For them going out means drinking and getting involve into a fight. This does not fit into my style. (Julio, substance user)*

Additionally, there were indications of a lack of information relating to how things function in general in the UK.

*What annoys me in Brazil is the system in which the people live there. Everything in there is per month. Here, we have a much more active lifestyle.  
(Michael, substance user)*

When Michael describes everything in Brazil as being 'per month', he is referring to the fact that people in Brazil get paid once a month, and so their plans and actions depend on this monthly salary. Meanwhile, in the UK, according to Michael's experiences, salaries are paid weekly so people have a much more active lifestyle as a result of having money coming in every week.

### **6.3.2 THEME 2: Patterns of substance use amongst Brazilians in the UK**

The second theme describes characteristics relating to patterns of substance use among participants residing in the UK. Throughout the interviews, participants described rich information about aspects of initiation of substance use, beliefs, and forms of using. The analysis revealed significant information about substance use initiation. Specifically, all substance using participants reported experimenting with cannabis prior to immigrating to the UK, however, patterns of use such as quantity, type of substances, and frequency seemed to change whilst living in the UK.

Participants also outlined reasons for using substances and the influential aspect of the set and setting on their drug-taking behaviour. Cannabis for example, is the only substance that seems to be used by participants while alone, whereas the use of all other substances appear to have a social element attached to it. The analysis also revealed that both substance using and non-using participants hold the view that

drug use in British society is normative, although these normative beliefs seem to be constructed differently by substance users and non-users. Lastly, substance using participants described being in control of their drug-taking behaviour, and were not inclined to use drug injections.

### Getting into substances

This sub-theme describes how substance using participants began to use substances. Alcohol was the first type of substance to be used. The age of alcohol onset occurred between the ages of 16 and 18 whilst living in Brazil. All substance using participants reported using cannabis prior to immigrating to the UK, however, experience with other types of illicit substances occurred mostly in the UK. This was described by Michael, *'At that time, I just used to smoke cannabis,'* and also Douglas who said, *'I used to smoke cannabis because it was cool'*. In general, participants described that their reasons for experimenting with other types of substances in the UK was influenced by their groups of friends and/or partners who at the time were also substance users. In some cases these relationships were with British people, and at other times with Brazilian people.

*I had a boyfriend for almost three years. He is British and he always used drugs because people in here begin to use at a very early age. But it was interesting how I learned to use these things because he does not use these things to go to a party. No, he always knew the right amount to use, always knew the chemicals involved in the substances, always knew how it acts on the body and always knew what to mix with. He was very curious about drugs. So I used that too and it was how I've been introduced to other drugs (illicit)'. (Douglas, substance user).*

An association between history of substance misuse in the family and participants' patterns of substance use were not strongly established. Julio was the only substance



using participant to have experienced growing up in a substance misuse environment in Brazil.

#### Reasons for using substances

Participants differed in their reasons for using substances. For example, sensation-seeking was the main reason for Julio using substances, *'I want something that brings me fun, no problem'*. Ivo, who is a Brazilian gay in London, also reported using substances for sensation-seeking, particularly in relation to sexual activity. However, by exploring his reasons in-depth, Ivo concluded that drugs have another main role in his life, namely as a mechanism of fulfilling something inside him.

*I do not know why I use. I think I use because deep inside I have that issue of dealing with who I am. There is a hole inside me that needs to be filled. (Ivo, substance user)*

The use of drugs as a coping mechanism was also reflected in Michael's discourse. In this case however, an increased use of substances was directly associated with the difficulties he experienced in dealing with his problems in the UK, particularly problems relating to friendship.

*I always smoked a joint and drink a bit. I am not saying that it is acceptable, but it was something controlled. I used to manage it, but then later I got to a point in which I was using as a form of escaping, to forget about problems as I got to a point that I could not trust anyone. (Michael, substance user)*

The other main reason presented related to introspective potentialities that certain types of substances can bring. Both Patricia and Douglas reported this, although Patricia perceived these benefits to be in the use of cannabis, and Douglas in LSD.

*When I smoke, I can see things from another point of view as if I am reflecting about myself. I like that. I can analyze myself from the outside.  
(Patricia, substance user)*

### Trends in Use

Several comments were made in the interviews about how fast alcohol is consumed in the UK and how much the participants themselves adopted this drinking style.

*In Brazil, a party starts late and finishes late. Then, for example, you will start drinking little by little, keeps talking and interacting. I think 'getting drunk' is a consequence of having a great night out and you do not go back home because the party was boring. Here is different, it seems that you have to drink a lot. This might be because here you drink fast as places do close too early and you do not realize it. I was talking to someone the other day about this and we are beginning to realize it. If I think about the intensity that I drink a pint, the speed that I do it I can see that I did not drink like that when I arrived here. So things changed a bit. This may be a British footprint that I will probably take to Brazil, but I do not know how it would fit in there. (Douglas, substance user)*

Another similar trend found among substance using participants was the enjoyment in mixing substances. The most cited mixes were: (1) amphetamine and cocaine, (2) cannabis, cocaine, and alcohol, and (3) LSD and cannabis. Julio, a substance user, describes this trend.

*R (researcher): When you are going to use cocaine, ecstasy, MDMA, or any other drug, do you know which sensation you are looking for? Or, is about the drug that is available at the time?*

*J: No, depends on the situation.*

*R: So for example, when you go to a bar or a pub?*

*J: I am going to use cocaine.*

*R: And in a nightclub?*

*J: MDMA, well depends, but I will not use MDMA in the pub.*

*R: And if you go out at night, for example a night club, do you mix the substances?*

*J: Actually, my favorite drug is a cocktail, a mixture of amphetamine with cocaine. All mixed, between us we call it Calvin Klein.*

None of the participants reported trying to inject substances in the past, and with the exception of Douglas, all participants highlighted a negative stigma associated with injecting drugs as well as smoking crack cocaine.

*I like to think that I would like to try everything and have my own opinion about it. But I never had curiosity to use (heroin). But I think sometime in my life I will use to see how it is, but I do not have this curiosity now.  
(Douglas, substance misuser)*

### Set & Setting Involved in Substance Use

Both set and setting had a strong influence on participants' substance use, which cannabis been the only substance which participants reported consuming both alone and in groups.

*I like to smoke (cannabis) with my friends, very often in the dinner parties that we do at home. We like to have wine and smoke weed. I also like (smoking cannabis) when I'm in London and I am going to see a show. I like to go to these places and to see things from crazy eyes.  
(Patricia, substance user)*

The use of all other type of substances seemed to have a social aspect attached to it. In particular, the 'barbecue' scenario with Brazilian friends was mentioned several times.

*Barbecue is "Cherasco"<sup>1</sup>. People eat two pieces of beef and the rest is all about sniffing cocaine. The other day we got 7 grams of cocaine and I helped to finish with it. Just to you see how strange it is: I went there with the full intention of staying for two hours, only to see friends, say hello-hello and bye-bye. I ended up sleeping there and spend 100 pounds. I slept very badly and ended up with a blocked nose.  
(Ivo, substance user)*

The UK weather was also mentioned as a potential influence on substance use behaviour.

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<sup>1</sup> Cherasco means in this context a combination of the verb 'cheirar' (sniff) and 'churrasco' (barbecue)

*I think there are many influential factors in here. In Brazil, life is much more outdoor than here. In Brazil you can go to a barbecue, drink beer in an open place, on the beach. To be fair I drink much more when I am in Brazil. The cold beer in a 40 degree sun is a great thing. The beer is lighter as well. Here you don't look outside when is raining and want to drink a beer. I don't know, but I think that if I was living in Brazil my drug consumption would be much lower... I think the synthetic and hallucinogenic drugs do not fit in an open place, with fresh air. For these drugs you have to be in a dark place with music in high volume. You don't want the other people to be staring at you during the daylight, right? It is all about appearances in Brazil.*  
(Julio, substance user)

### Normative Beliefs

Both substance using participants and non-users expressed the belief that the use of illegal substances appears to be a UK norm. It seemed that for non-substance using participants, this normality is represented in terms of easy accessibility to drugs.

*It is much easier in here, much easier than in Brazil for you to get some (illegal drugs). It is illegal in both countries, but it is much easier here. You go out in the streets now, cross the road, and you can get something.*  
(Patrick, non-substance user)

For substance using participants, this sense of normality is reflected in the drug-taking culture that prevails in the UK, which does not necessarily mean that this is specific to British people only. When asking participants whether this drug-taking culture had influenced their behavior, there were some indications that it had.

*I believe so. This is because of the European culture. This is a culture that uses a lot of drugs, more synthetic drugs, and when you want to interact with a culture you usually do what the culture is showing you.*  
(Julio, substance user)

Patricia cites this assumption of normality as a major cause for Brazilians using substances. In her view however, vulnerability to substance use is impacted by the 'dazzling' feeling that many Brazilians experience by living in London.

*I do not know if what causes Brazilians to use drugs in here is due to the fact that is very liberal in here. I think the cause is because there is in here a very large group of dazzled people. They are dazzled because it is different, a big city, everything is accessible, right? It's kind of a fantasy for many who come from Brazil. Very often they come from a small town in Brazil and ended up into a place like this. That is a shock. I don't know if the number of Brazilians that use drugs in here is high, but I do see loads of them misusing it. Gosh! From people that you would never expect.*  
(Patricia, substance user)

#### Thoughts about Substance Use Behaviour

The majority of participants described having full control of their substance use behaviour. Substance dependence was not a concern for them due to the high levels of self-control that they claimed to have.

*When you surrender yourself to drugs, you are a loser and have to fight. This is the same with cigarettes as I was telling you. Yes, it is kind hard to leave, but when you have determination you do not need anything else. I smoked for many years, but when I said that I would no longer smoke I never ever smoked again.*  
(Julio, substance user)

Douglas also stated that vulnerability to substance dependence was not a worry for him, and similar to Julio, this sense of self-control stemmed from previous experiences of stopping or decreasing the use of other types of substances. For both participants, this referred to using lower class drugs than the ones they were using at the time of the interviews.

*No, I think vulnerability never bothered me at all. There was a phase of discovery when I was in my second year of university. When I use to think 'I want to do again'. But looking back at my experience with cannabis at the time, it was more*

*about discovery, curiosity. It was not a dependency. I think I never had 'that' need to use. Sometimes when I go to places, I would like to have a LSD with me to see things differently and sometimes I do not need it because I know it might be difficult to obtain. I never felt that my life would be horrible if I have not used something. (Douglas, substance user)*

Contrary to the other substance using participants, Ivo was the only one to show signs of concern about his drug-taking behaviour.

*I still don't want to admit for myself that I am addicted. I don't want to admit it. But there is a voice coming from insight me trying to say something. (Ivo, substance user)*

### **6.3.3 THEME 3: Patterns of substance use amongst Brazilians in Brazil**

Similar to the previous theme, this third theme describes the characteristics associated with substance use, but specifically to participants in Brazil. The analysis revealed that substance using participants within this group showed similarities in the initiation of using substances. These similarities related to age of onset and the type of substances used. Although reasons for substance use varied amongst participants, it seemed that for the large majority, the use of substances served some form of coping mechanism. Other characteristics which emerged from this group were the presence of other substance users in their family; the high use of cannabis; social aspects associated with substance use; and the sense of control participants have over their substance use behaviours.

#### **Getting Into Substance Use**

Commonalities in the onset and trajectory of substance use were found, with alcohol and cigarettes the first substances to be experienced. In general, these initial

experiences occurred between the ages of 13 to 15. Bianca, a substance using participant said:

*I drank alcohol for the first time at the age of 14. I did not like much but then I started to go out with a different group of girlfriends. They like drinking and later smoking cannabis too.*

Cannabis seemed to be another popular substance experienced during the adolescent period where age of onset ranged from 15 to 18 years old as described by Daniel, 'At with 17 I discovered cannabis. I used to smoke and drink together. Cannabis and alcohol were always together.' Bianca also describes the use of cannabis in her teens 'From the age of 16 to 19 we used to smoke everyday and all day.' There were also a few cases in when participants started to consume prescription drugs during their teens. The age of onset for cocaine use was between 21 to 25 years old.

*During the college and university times it used to be alcohol, cannabis, and alcohol. Then, around my 22 – 23 I started to use cocaine'.  
(Pietro, substance user)*

There were indications of substance using participants growing up in an environment where alcohol and cannabis were misused by family member. Peer and sibling influence to start using substances was also reported several times.

*I started drinking alcohol mostly because my family drinks a lot. Every time that we get together we drink. We drink a lot. My dad is always drinking.  
(Gustavo, substance user)*

### Reasons for using substances

The majority of reasons cited for the use of substances relate to substance use as a mechanism for dealing with psychological problems. There were clear indications for

example of participants describing alcohol and cannabis as ways of reducing stress and daily problems.

*I think I smoke to relieve heavy stuff. I feel like I am filling a bucket and when you smoke the bucket gets empty and then starts to fill it again, you know? As if it (cannabis) helps to recharge something.  
(Bianca, substance user)*

Personality characteristics such as impulsivity and anxiety sensitivity were also reported.

*I am a control freak person. Perfectionist. I think too much and this is very bad. I do analyse myself too much. It is ridiculous how much I do analyse myself. I think weed helps me to relax and to be an easier going person. (Lais, substance user)*

Additionally, some participants described their reasons for substance use to be due to the positive sensations they can bring. For example, as Gustavo describes, '*I use because it is a great laugh*' and '*I feel more confident*'.

### Trends of use

The most common and popular types of substances used reported by participants in Brazil were: alcohol, cigarettes, cannabis, and cocaine. There were cases of participants using the prescribed stimulant drug Methylphenidate (trade name Ritalin), as well as a few reports of participants experimenting with ecstasy, magic mushrooms, and LSD. The most common mix of substances were: (1) alcohol and cocaine, and (2) cannabis and Ritalin.

*I only tend to use cocaine if I am drinking together. It is not fun without alcohol and I don't know why. Alcohol and cocaine for me is like coffee and cigarettes.  
(Pietro, substance user)*



A similar pattern was observed across the sample in relation to a change in consuming cannabis in groups, to consuming it alone.

*I only started to have my own weed much later, in my twenties. I didn't even know by the time how to role it because I only used to smoke with a group of friends. Then only later when I started buying my own weed that I started to smoke alone. (Lais, substance user)*

This 'group-to-alone' trend was also reported by Patrick and Alan in the use of cocaine. Other participants however, reported continuing to use cocaine within groups of friends. Moreover, age appeared to be a factor which influenced a decrease in the use of cannabis over the years, although it did not lead these participants to stop the use of cannabis.

*When I was 16, there were many people smoking (cannabis). We were always smoking. Basically, everyone that I knew was smoking. At that age I also started to live alone as my parents moved to Rio de Janeiro. I was then free to smoke and my friends would come to my house to smoke. That was when I used to smoke everyday. I used to smoke around 8 cannabis cigarettes per day.... No, today I only smoke one per day. (Daniel, substance user)*

#### Set & Setting involved in substance use

Two distinct types of set and setting which influence participants' substance use were reported in the interviews. These differences were based on the type of substance used. For example, drinking alcohol was strongly associated with going out at night, whereas the use of other substances such as cannabis and cocaine were associated with getting together with friends in somebody's house.

*I don't like smoke (cannabis) before going out. It is not good. To go out you have to drink. (Gustavo, substance user)*

Only Daniel reported using cocaine with his friend prior to going out, however, never whilst at the party, *'Then we started use cocaine to go out. All the time we thought that*

*we would go out we end up using cocaine*’. Furthermore, getting together pre-party was disclosed by almost all participants and often involved only the consumption of beverages.

The use of cannabis and other illegal drugs was strongly linked to social aspects of being with friends.

*I've used LSD and Ecstasy on a few occasions in the past with friends, not in a nightclub but when everybody was together at a party like New Year Eve. Then we do all together for everyone to be in the same vibe.*  
(Gustavo, substance user)

Cannabis, when used alone by participants, usually occurred in settings which involved relaxation, for example, whilst watching a movie.

*Like this, if I smoke (cannabis) alone is because I am doing something to me, to relax, to watch a cool video, to watch a movie, to listen a song. If I am going to smoke with friends it is because they are my friends, I know them, so I will enjoy myself but being with them.*  
(Ricardo, substance user)

Use of cannabis on trips to the seaside with friends was also another common pattern of use reported.

### Stigma to drug use

Overall, participants described that in Brazil there is a strong negative stigma attached to the use of illegal substances. However, this stigma tends to not be associated with the use of cannabis, nor with legal substances such as alcohol, cigarettes, and prescription drugs (e.g. Ritalin).

*If they (adult people) know that you use cocaine, in their mind you are ended, finished, fucked up. My circle of friend here, people that I live here in Porto Alegre, which are people working in the media industry, cinema, advertising, will not think like that. But my parents and many other people will. (Daniel, substance user)*

There was also an overall shift in participants' access to illegal substances (cannabis and cocaine). Specifically, during the initial years of using substances participants had to go to the slums to get supplies, whilst now, they are able to have substances easily delivered to them, either by a drug-dealer or by a friend.

*This is how it works today: When I was young we used to go to the slums to get some (cannabis). No one that I know will go to the slums anymore, no one. There is always someone that does that, you know? So it's not risky anymore, understand? (Lais, substance user)*

The majority of substance use participants showed a clear understanding of the risks involved in going to the slums to get drugs and in some cases, it appeared that this risk was attached to certain feelings which enhanced the participants' experience of using the substance.

*The advantage today is that it is a control risk. Today, I no longer need to take that risk anymore. Today, let's say, I paid more expensive, much more expensive but I will not go I don't need to go in the slums. I don't have the desire to do this anymore (Daniel, substance user)*

### Thoughts about their substance use behaviours

All substance use participants described having control over their substance use behaviour as illustrated by Daniel, *"I don't think much about stopping. In fact I do think that one day I will stop, but I don't have a deadline for it. When I want to stop, I will*

stop'. Gustavo however, was the only participant that expressed some sense of awareness about vulnerability regarding this perceived sense of control.

*Taking it (cocaine), gives a nice feeling. It is a very good feeling. But I know that this feeling has to be controlled. If I exaggerate a bit more, I can lose control... I can control my self, but I have a certain fear of thinking that I can have control because I know that I know things until certain point, I am aware that I don't know everything. It is obvious that we don't know everything so there might be a chance of going a bit over the limit, but I think I would know to stop me.*  
(Gustavo, substance user)

There was also a sense of normality associated with cannabis use. Several times, cannabis use was linked to a lifestyle preference with minimal perceived consequences to the participant's development. This lack of awareness about cannabis use was clearly described by Lais in a scenario where she was telling her Mum to stop asking her to quit smoking. It is important to note that Lais is 30 years of age, she lives and depends financially on her parents and does not have a job nor a career direction; she also finds it difficult to maintain close relationships and is now taking Ritalin, which, according to her, helps her organise her daily activities.

*That was I told my mum when she came to speak with me the other day: 'look mum, you have nothing to complain about, okay? I've always been good at school, I did always well in the university, okay? You have nothing to complain about. Cannabis does not influence my responsibilities, do you understand? Smoking or not smoking I'm disorganized anyway. I'm slow person. My smoke behaviours is not negotiable, understand? I will continue smoking if I want to and will stop if I want to'. I think that in her views she is more concern about other people finding out that her daughter smokes. It is all about what the people think about. I think that she knows that for me and my brother cannabis does not represent any risk. It is not a risk for our lives.* (Lais, substance user)

It is evident from Luisa's extract that there is a strong sense of denial in recognising the impact that cannabis might have on her life. Ricardo on the other hand, was the

only participant to show some awareness of the potential negative effects that cannabis may have on his health.

*I know that something will perhaps do badly for my lung. But, if you are going to think like this way than neither Coca-Cola you will drink anymore nor eat salty or fatty foods. You are surrounded by things in the supermarket that is bad for you. So if you are going to live just consuming what is good for you, I will have to be a macrobiotic, I will have to grown my own lettuce, I will have to eat only my own tomatoes. So you cannot live in a world without using things that are bad for you. (Ricardo, substance user)*

#### **6.3.4 THEME 4: Cross-national comparison: Individual characteristics**

The fourth theme relates to individual characteristics of the participants in terms of how they see themselves and describe their way of life and family relations.

Analysis was conducted by exploring similarities and differences between substance using and non-using participants across the UK sample and Brazil sample. It appeared that preferential substance use was associated with similar individual profiles. Non-substance use participants from both samples shared similar introversion personality characteristics. Furthermore, substance using participants from both samples were found to lead much more active lifestyles than their non-substance counterparts. Coping mechanisms also differed according to country of residence and while participants in the UK (particularly substance users) reported constraints whilst growing up in Brazil, participants in the Brazil sample reported growing up with divorced and controlling parents.

##### Description of the self

This sub-theme shows how participants describe themselves in terms of individual characteristics and personalities. A number of traits were described and in some cases these individual characteristics were shared between participants regarding

their substance use status (substance user and substance non-user) and preferential use of substances. In the UK sample for example, poly-substance using participants described the following traits: sensation seeker, hyperactive, disorganised, and interested in several things.

*I just cannot live with monotony. The monotony stresses me a lot. Even at home. I can not stay at home without doing something. I am not a guy that stays at home in front of the television or playing video-game. I just cannot.*  
(Julio, substance user, UK)

Patricia, a UK participant who frequently uses cannabis, reported being a determined and secure person. Yet, in Brazil, participants who use cannabis on a regular basis showed different traits such as getting distracted easily and being anxious and rebellious.

*I am an anxious person, but I am not like those anxious people that have to do a lot of things. In some way, my anxiety paralyzes me and I ended up doing nothing of what I have to do.*  
(Lais, substance user, Brazil)

Participants in Brazil who were users (or ex-users) of alcohol, cannabis, and cocaine also reported high levels of impulsivity and high sociability.

*I am very impulsive. Even today, if I am going to eat a chocolate bar I have to control myself a lot to eat only two or three pieces.*  
(Pietro, substance user, Brazil)

A few characteristics were also shared by non-substance using participants. In the UK for example, outgoing as well as depressive characteristics were prevalent as described by Carla, *'I've always been very outgoing'*, whilst in Brazil non-substance

using participants were found to be highly cautious in nature, and to show signs of low self-esteem.

*R (Researcher): Do you like things to be more stable then?*

*L: Yes, for sure.*

*R: A routine? Quite life?*

*L: Always.*

*R: Does the novelty interest you?*

*L: No, it is scary*

*(Lucio, non-substance user, Brazil)*

### Lifestyle

A similar distinction was also observed across both samples between substance using and non-substance using participants regarding lifestyle preferences. In both countries, substance using participants reporting leading a much more active lifestyle in terms of having different types of friends. As Gustavo in Brazil describes, '*I have many friends. Friends from all social classes, which is great*'. Another similar characteristic between substance users across countries was the engagement in several activities; for example, work, leisure, sport, and going out.

*I used to work in an insurance company selling insurance from Monday to Friday, from the age of 14 to 17. Then I was one year in the Navy. Then I went back to work in the insurance company. After 3 months there I decided to come to the UK. I used to have a very active lifestyle in Brazil.*

*(Julio, substance user, UK)*

Yet, non-substance using participants from both countries reported leading a much quieter lifestyle. Carla in the UK for example, described this lifestyle as being the same before she left Brazil:

*I used to have a group of friends in my childhood that I followed since my first year at school until the last one. It was 10 years with the same group of friends.*

Lucio, non-substance user in Brazil, also described this pattern:

*I did not used to go out much. I prefer to stay at home. I don't like parties, tumults. I only have one group of friends.*

### Coping mechanisms

Overall, substance using participants in the UK and in Brazil expressed differences in how they deal with difficulties in life. In the UK, Ivo was the only participant that mentioned going travelling as a form of escaping from problems. Coincidentally, the use of drugs was also associated with travelling for Ivo.

*I remember going traveling in Europe at that time. I was escaping of my problems. I want to give a time to my head. I did a backpack and I experimented some drugs in this trip.*

In Brazil, Ricardo stated that to deal with stress he often engages in sport, '*I have to de-stress myself by practicing sports. To play tennis or going to play football 2 or 3 times per week*'. Similarly to substance using participants in the UK, Ricardo also mentioned the importance of keeping focussed on a target when things get difficult. Douglas, a substance user in the UK, described that everything in life was hard to achieve and the way to achieve things was to be resilient.

*I'm bisexual. I had many relationships with men and this was also something that the society looked bad at me as I circulated in one part of the society that my bisexuality was accepted and other more oppressed. So I always felt in my skin many types of divergences and I had to deal with it internally. Always dealing with an internal crisis in which I had to fight to get anything. Everything was always hard to achieve, do you understand? But I think this was the way on how things were developing in my life.*



With regard to non-substance using participants, similarities were found between participants in Brazil and participants in the UK. These similarities related to a lack of skills in dealing with adversity as reported by Luisa in the UK, '*I lie to protect myself. I lie a lot*'. Lucio in Brazil also said:

*I very often get upset with myself because, as I say to my wife, I accept things not only at home but outside too just to not create confrontation. I don't argue much and I let some things to happen. These things accumulate, right? I do suffer a lot alone.*

### Strains growing up

Contrary to participants from Brazil, UK participants indicated an awareness of the difficulties experienced while growing up in Brazil. These difficulties were especially evident among the substance using participants.

*I grown up in a family of 10 people and I was the "left out" child. Not on purpose, but more for ignorance as my mum had first five boys and then came a girl. So when I born I was left out because soon after me, my sister was born. She was blonde, cute, and I was quite ugly and so I was left behind.*  
(Ivo, substance user, UK)

Similar to Ivo, Julio also described difficulties growing up in Brazil in relation to family circumstances.

*My father used to look at me in a very negative way, especially because of the type of friends that I used to have. He used to say that I was going to be a plod. You know how alcoholic people are, don't u? They always think that everybody is a plod. I think this feeling of need to prove that I was not a plod stayed with me for long time and I only found happiness in the day that I stopped to think that I should to prove to others what I am.*  
(Julio, substance user)

Patrick was the only non-substance using participant in the UK that indicated some kind of distress growing up in Brazil.

*I left home at the age of 14 to live with my grandmother. My mum passed away when I was nine and then my dad married again and had two other sons. My relationship with then was not very good. It was a lot of fight all the time and she (stepmother) was too young and did not know to deal with that.*

### Description of parents

Apart from four participants in Brazil, all other participants reported having divorced parents. In the UK, only Julio had divorced parents although his parents divorced after he emigrated Brazil. Additionally, Eduardo in the UK and Mario in Brazil lost their mothers at an early age and both were raised with the support of their grandmothers.

In relation to parental style, in Brazil there were more reports of controlling parents among substance using participants than non-substance users.

*Yeah, my dad is much stricter than my mum. My father is strict, strong; he used to ask a lot from me. Strong man. I was always afraid of him when I was little. It was like that I did not have respect for him but fear. For example "Oh God, my father" what will happen if my dad discovers.*  
(Daniel, substance user, Brazil)

None of the participants in the UK reported having controlling parents.

*We are friends, open to each other. I listen them and also continue to learn a lot of things from them, but it never existed this thing of them regulating me. I never accepted to be regulated. They understand that and, directly or indirectly, they cooperate with this type of relationship.*  
(Douglas, substance user, UK)

However, substance users in the UK as well as in Brazil did report growing up with their parents often not being at home due to long working hours in order to support the family financially.

*I had lots of conflict with my mum because she wanted me to be in one way, but I wanted to be in another. These things happen, but because my mum and dad used to work a lot, they did not have time to be teaching us. My mum used to work in the morning and going to university in the afternoon and night, whilst my dad used to work and live in another town. All the responsibilities with the house and with my brother were mine since the age of four.*  
(Bianca, substance user, Brazil)

### 6.3.5 THEME 5: Cross-national comparison: Protective factors

The final theme which emerged from this interpretative analysis describes the psychological, social, health and spiritual factors that appear to protect against substance use or at least delay the age of initiation. Overall, participants from both the UK and Brazil shared similar protective factors; however, only UK participants cited finance to be a protective factor. Of interest were the gender differences observed in protective factors. For both countries, health, engagement in sport activities, and financial reasons were reported as protective factors by male participants, whereas negative expectancies were reported as a protective factors for females only.

#### Health & Sports

Concerns about the potential negative effects that substance use might have on an individual's health was described briefly by Douglas in the UK and Ricardo in Brazil. Both participants were similar in relation to late substance use onset and an involvement in sport during their teens.

*Look, alcohol and any other drug I started to use later, around my twenties. Until then I was very keen in sports, a proper sportsman. I did not like substances I was against it and was focused on sports. I was always against my friends who used to drink and smoke cannabis. However, over the years I started to drop slowly the sports, started to focus on the studies and to relax a bit.*  
(Ricardo, substance user, Brazil)

Furthermore, the way in which sport may help discourage from substance use was evident in Douglas' discourse, particularly the relationship between sport involvement and a fear of experiencing side effects of drugs in his body.

*I read a lot about drugs. I used to think that there was a purpose to be banned. That drugs had a negative effect on people. I indeed experienced some negative effects on my sport development. For example, the heart beat accelerates. There were of course things that are not even understandable by the medicine because it is not a something well studied, mostly because it is illegal. But it must have side effects that we do not even know yet. I used to be afraid about it before, but after I experienced by the first time I had no more fears to use it again.*  
(Douglas, substance user, UK)

Despite this, neither an awareness of the negative effects of substance use on health nor engagement with sport was enough to protect both participants against substance use, though it may have contributed to the overall delay in initiation.

### Spirituality

Spirituality played an important role in the life of three non-substance using participants in the UK. For these three participants, God was regarded as responsible for keeping them focused on not giving up during difficult times. It also appeared that the significance and presence of God in the lives of these participants had been intensified due to the array of difficulties that participants were exposed to in the UK.

*In London, God showed that he exists. That he is the great father... After all the disappointments and suffers that I experienced in here, there was always a person that would appear in my life giving a word of comfort by talking about God. Then I started to realize that everything that was happening just could be God. Had to be God. There were so much that happened in here and the fact that I didn't go back home, that I didn't give up, and never got into drugs, could only be something from God.*  
(Carla, non-substance use participant, UK)

As illustrated by Carla, God was seen as a figure who brought words of comfort during difficult times. Patrick also indicated that he was protected from any vulnerabilities in his first years in the UK by the presence of a spiritual force. For Patrick however, his spiritual belief was associated with the feeling of being in contact with his Mum who had passed away when he was a child.

*I am proud to not have got lost. I used to drink a lot in Brazil, I could have continued like this in here and had used all the drugs that were offered to me. I think there is the religious side as well. I strong believe that I need to do well for my mum that I lost very early. I think she is here with her hand over my head guiding me... I believe in this... I am very religious. Many periods though I didn't care about religious and other periods I got more into it. Today I am into religious. I try to pray a lot, to go to the mess and to focus on this. I think I did not get lost in life only because of the spiritual powers that kept me in the right track. (Patrick, non-substance user, UK)*

Faith beliefs were not prevalent among participants in the Brazil. Lucio, who is a non-substance user, was the only participant to report a belief in God and to frequently attend religious services.

*I think we have to believe in something, so at least we should believe in something good. (Lucio, non-substance user, Brazil)*

### Financial reasons

The cost of using substances was described by Eduardo and Patrick in the UK as one of the reasons for non-substance use. Both participants reported having no intention to spend the money they obtain through long working hours on substances, nor on the lifestyle attached to substance use.

*I will not say that I have never smoked (cannabis). I smoked a joint once that I got drunk in my first year, the first few months, in 2004. I only smoked because everyone was smoking and I wanted to try. I didn't like though. I have never been addicted to anything, even cigarettes. All my friends used to smoke at that time and use cocaine, and I knew that if I was to get involve I would have to spend one hundred pounds each time going out. (Patrick, non-substance user, UK)*

None of the participants in the Brazil sample mentioned financial constraints related to substance use.

### Negative outcomes

Non-substance using female participants from both samples reported not using substances due to the negative outcomes associated with it. For example, Gabriela in Brazil cites the negative expectancies she holds regarding alcohol use as the main reason why she does not like to drink alcohol.

*I do not drink because I feel bad the next day. I do not like how I feel when I drink. I don't like feeling dizzy and things like that, I do not like to feel bad. I like to feel who I am and also I know that sometimes when drinking you can end up doing things that you would not have done if you had not been drinking. I do not like that (Gabriela, non-substance user, Brazil)*

In the UK, Carla describes her bad experience of taking ecstasy on a night out. It seems that the negative experience she had with the drug was also influenced by the thought of her dad disapproving of her behaviour, as well as her naivety regarding the effects of the substance.

*I said, 'My lord, today is the day that I will die'. I said 'blessed my father's fault that spoke for me to not be doing it and look, I'm here doing it now. This is his curse'. I said: 'Alessandro (boyfriend), I am not feeling well', and he said. 'It will pass. Just relax, it will pass'. His mind was far away, laughing of me. On the next day, after the symptoms has gone, I got up, went to the bathroom, started to feel better and then I said that I would never do that in my life again. Never. Then he (boyfriend) said: 'look, this drug has a strange effect that if you are happy or in a good moment of your life, you will get crazy, stoned, and will enjoy the night a lot. Will dance even without music. (Carla, non-substance user, UK)*

Another factor which influenced the development of negative expectancies across both samples was the role of the media in delivering information.

*I watched a lot of soap operas and I know what happens to a person that uses any type of drugs and gets hooked to it. No, I do not want this for my life. I have a future, you know? I think to be someone in life. (Luisa, non-substance user)*

#### **6.4 SUMMARY OF THE KEY FINDINGS**

This qualitative phase was conducted to lend support to the quantitative findings, as well as to give insight into the social and cultural factors that underlie the susceptibility of Brazilian immigrants to use alcohol and other drugs. Factors that may play a protective role in substance use were also explored.

In line with the cross-national design characteristics of this research project, the interpretative analysis was conducted by exploring similarities and differences between the UK and Brazil sample. Five themes emerged from the analysis, each comprised of a number of sub-themes.

With regards to the experience of being a Brazilian immigrant in the UK, some distinguishing characteristics were found between substance using and non-using participants. These differences relate to the reasons for coming to the UK, views about being an immigrant, types of difficulties experienced, and cultural identifications. There was also limited contact between Brazilian immigrant participants and British society overall.

By examining the themes about patterns of substance use in the UK and Brazil samples, it was found that cannabis use was prevalent during the adolescent period across participants from both samples. It is possible however, that the use of

cannabis may have been something that the Brazilian immigrants brought with them from Brazil, while in the UK they may have simply expanded their choices to include other substances. In Brazil, cannabis was the most popular substance used and cocaine was the only substance that participants were keen to experiment with after cannabis. The presence of a substance misuser in the family was higher among Brazilians in Brazil and there were a few instances in which the participant was aware of the influential aspect that substance misuse in the family had on their own substance use behaviour. Substance using participants in the UK reported a range of reasons for using substances compared to the sample in Brazil. One particular difference was that UK participants tended to use substances as a form of novelty- and sensation-seeking, whereas Brazilian participants tended to use substances as a coping mechanism. Trends in substance use also differed according to country of residence. The main difference was in the fast consumption of alcohol in the UK sample and the popularity of mixing substances. In general, both groups reported a social characteristic attached to substance use. Cannabis was the only substance that participants from both groups reported using when alone. A difference was also found in trends of substance use on nights out such that Brazilians in the UK tend to mix substances whereas Brazilians in Brazil tend to focus on drinking heavily. Another evident distinction between the samples was in how participants from both samples perceive substance use in the broad society. This difference largely relates to Brazilians in the UK holding normative beliefs about drug-taking and availability in the British society, whilst Brazilians in Brazil feel that there is a great stigma attached to substance use within the Brazilian society. Lastly, substance using participants from both groups shared similar thoughts regarding a lack of interest in injecting



drugs, as well as a belief that they have a great sense of control over their substance use behaviour.

In terms of individual characteristics, it appears that preferential substance use was in some cases associated with a particular participants' profile. This was the case of poly-substance users in the UK and cannabis users in Brazil. Further, there was a similar introversion trait between non-substance using participants across samples, as well as lifestyle characteristics. Specifically, non-substance using participants reported a calmer and less active lifestyle compared to substance using participants. Substance using and non-using participants from both samples also showed differences in coping with adversity. Overall, substance users adopted a range of coping mechanisms, whereas non-substance users reported a lack of coping mechanisms and difficulties in dealing with adversity. Lastly, participants differed according to country of residence on their awareness of difficulties experienced while growing up as well as parental styles. While participants in the UK acknowledged the difficulties experienced in their childhood in Brazil, only the participants in Brazil reported growing up with controlling parents.

The last theme which emerged from this analysis was a comparison of protective factors across samples. In general, participants from both samples shared similarities in protective factors, although the cost of using substances was reported as a protective factor only for male participants in the UK.

## CHAPTER 7 DISCUSSION

This thesis examines the extent to which changes occurring under the acculturation process in the UK culture are placing Brazilian immigrants at risk of substance use problems. In doing so, this study adds significantly to the literature examining acculturation which has, until recently, been dominated by the assumption that immigrant substance use behaviours are due to them adopting the values and norms of the host culture or by the high stress that they experience when adapting to a new culture. This study suggests that such a unidirectional approach limits understanding of the substance use behaviours of immigrants and members of minority ethnic groups. It therefore argues that a multidimensional approach should be taken, specifically measuring the social, cultural and behavioural components of migratory experiences.

This chapter will now provide an overview of the key findings from this thesis, and consider the theoretical and practical implications of these findings to the field of substance use in minority ethnic groups. Limitations of the study are presented and the thesis closes with a discussion of areas with future research potential.

### 7.1 OVERVIEW OF THE KEY FINDINGS

#### **7.1.1 Do Brazilian immigrants in the UK use substances more frequently than their counterparts in Brazil?**

There is evidence that Brazilian participants in the UK, compared to the participants in Brazil, tend to use the majority of the substances explored in this research, slightly more often. Statistical significance, however, was reached only in a few observed

differences. Specifically, by analysing types of substances used independently, the use of recreational drugs (e.g. MDMA, ecstasy, amphetamines) was the only type of substance use to show a significant difference.

A closer inspection on how patterns of use differ according to country of residence revealed that more participants in the UK reported drinking more than once a week. Additionally, results revealed that those UK participants that use cannabis and sedatives do tend to use these on a less regular basis than their counterparts in Brazil.

These results are particularly relevant in understanding the preferential substance of choice by the Brazilian population in the UK, as well as the population in Brazil. In line with this, results suggest that apart from recreational drugs, there is a similar trend of substances of preference used across both countries. Such patterns might provide an explanation, for example, for why cannabis is the most commonly used illegal substance amongst Brazilians in the UK. In this instance, it could be argued that Brazilian immigrants hold a strong normative view about cannabis use due to this substance having a more 'acceptable' view compared to other substances in Brazil. Furthermore, the high popularity of cannabis in the Brazilian community in the UK is in line with other studies that reported cannabis as the most commonly used drug across ethnic groups and age groups in the UK (for more detail see Beddoes et al., 2010). Therefore, it might be that similar to the Brazilian immigrants, cannabis use by members of other minority ethnic groups might also be influenced by normative views about this drug coming from their mainstream cultures. However, the social context to which Brazilians and several other members of minority ethnic groups are exposed in the UK may still play a crucial role in increasing the frequency and quantity of cannabis use in these groups, and in many cases lead to the use of other types of drugs.

An example of expanding the use of types of drugs is the high prevalence of recreational drugs use in Brazilians in the UK compared with their counterparts in Brazil. It might be that the popularity of these types of drugs in the UK is an influential factor in Brazilian immigrants' decision to use them. In Brazil, evidence shows a significant number of young Brazilians consuming recreational drugs (Madruga et al., 2012), however, the popularity and availability of this type of substances seems to be lower than in the UK. For example, by the time that data were gathered for the present research in Brazil (2013), MDMA (in the form of ecstasy) was the prevalent drug found in the electronic/rave party scenes in Brazil, and the presence of other types of recreational drugs (including mephedrone and legal highs) in general, were mostly unseen. It might be that the idea of 'being in London', which according to findings from the qualitative study in this thesis is related to feelings of liberty, detachment, and having an open mind, might lead Brazilian immigrants to believe that the use of recreational drugs is a form of entering into London's lifestyle.

Another significant result refers to the high number of participants in the UK reporting to be poly-substance users (i.e. any other substance excluding alcohol and smoking), as well as being regular drinkers and users of drugs concurrently. Binge drinking was also another factor with a significant difference between countries, with participants from the UK sample tending to engage much more often in binge drinking behaviours than participants from the Brazil sample. The findings that emerged from the qualitative analysis supported these results by revealing that Brazilians in the UK tend to take more of a range of substances compared to their counterparts in Brazil, and also tend to adopt the habit of fast-drinking of alcohol while living in the UK.

It is also important to stress that some observable differences were found between gender and age groups in types of substances used across samples. This is of particular relevance in the case of alcohol, smoking, and cannabis use, as these were the most prevalent substances used in both samples, as well as the type of substances that showed differences with regard to frequency of use in the Brazil sample according to gender and age groups. More specifically, results showed that in Brazil these types of substances are predominant in male participants ranging between 26 to 31 years old, whereas in the UK there is less distinction in the frequency with which these substances are used by male and female participants and participants from different age groups.

These age and gender differences in the Brazil sample finds support in a range of recent epidemiological studies carried out in Brazil that reveal similar differences (e.g. Jugerman et al., 2010; Larajreira et al., 2010; Madruga et al., 2012; Michell & Formigoni, 2007). It could be argued therefore, that amongst Brazilian in the UK the use of these substances are less likely to be influenced by gender and age group differences.

Another significant difference found in this research population is the tendency for male participants from both countries to engage in binge drinking behaviours more often than female participants. Such finding is in line with previous studies carried out across the UK and Brazil showing that binge drinking is positively associated with male gender (e.g. Laranjeria et al., 2010; Sanches et al., 2011; Viner & Taylor, 2007)

Overall, findings suggest that Brazilian immigrants might be bringing with them some patterns of substance use when immigrating to the UK. However, there is also significant evidence indicating that shifts in patterns of substance use are occurring in this migratory group while living in the UK. The main changes involve: (a) an overall

increase in the frequency of substance use, (b) high consumption of recreational drugs, (c) a rise in the use of multiple substances, (d) more involvement in binge drinking episodes, and (e) a lesser distinction between men and women regarding the frequency with which substances are used, as well as between participants from different age groups.

### **7.1.2 Psychological Predictors of Substance Use**

A set of variables identified in past research is associated with substance use, but evidence indicating that such variables address the profiles of minority ethnic groups remains limited. In the present research, there was an exploration of whether some established predictor variables for substance use in the majority of the UK population (Frisher et al., 2007) can also be used to explain substance use in members of the Brazilian community in the UK. These variables were: low levels of resilience, personality traits, positive and negative affect, and drinking motives.

The examination of these predictor factors began by exploring the presence of these variables in the participants according to country of residence. Results revealed only a few differences between samples. Level of resilience, for example, was the only variable to differ significantly between countries, with higher scores found amongst participants in Brazil. Scores for other variables, such as the personality traits introversion/hopelessness and impulsivity proved to be higher in the UK sample, though observed differences were non-significant.

One possible explanation for the lower levels of resilience in the Brazilian immigrants might be related to the lower levels of social capital (i.e. the benefits and challenges that accrue from participation in social networks and groups) indicated to exist in the

Brazilian community in the UK. Findings from the qualitative study, for example, revealed that apart from limited social contact between Brazilian immigrants and the British society, there is also a strong sense of resentment and distrust with respect to other Brazilian immigrants in the UK and within the Brazilian community itself. It seems from these findings that the feeling of loneliness reported by the Brazilian immigrant participants was not only a consequence of being far from their friends and families in Brazil, but also by the lack of attachment, affection, and trust between those Brazilians residing in the UK. As has been found, this lack of connectedness has a particular impact on the manifestations of resilience in cultures that, like the Brazilian culture, are collectivist in nature. In such collectivist cultures, working and cooperating with others is more like a cultural norm (Triandis, 1995). The construct of beliefs of personal efficacy (i.e. beliefs in one's capabilities to organise and execute the courses of action required to manage prospective situations) in this collective context is therefore strongly influenced by the relationship with others and by the perception of community capacity (Bandura, 1995). Perceived personal efficacy is known to foster individuals' resilience to adversity, as well as for providing the foundation for human motivation, well-being, and personal accomplishment (Bandura, 1977). That being said, it might be that in the face of adversities associated with settlement in the UK and the weakness of social capital presented in the Brazilian community in the UK, Brazilian immigrants might be experiencing numerous constraints to develop resilient attitudes towards difficulties in life. In addition, this sense of low social capital might also be linked to the presence of other psychological factors such as the slightly higher levels of hopelessness found in the UK sample.

A few trends were found between substance using and non-using participants in the presence of certain personality traits. In particular, levels of anxiety sensitivity were

significantly higher in substance using participants. Introversion/hopelessness, sensation seeking, and impulsivity were also found to be slightly higher in substance using participants, although a significant difference was not found. The examination of these four personality traits was based on evidence suggesting that these traits are associated with specific motives for misusing substances (Conrod et al., 2000). For example, research indicated that those highly depressed are more likely to be attracted to analgesic properties (i.e. prescription opiates) (Stewart and Devine 2000) and the analgesic effects of alcohol (Rounsaville et al. 1991) than those that are not depressed. As depression-prone people are likely to self-punish themselves, the use of such substances may serve as a means of inhibiting the effects of this punishment. Yet, individuals prone to anxiety sensitivity might use substances as a maladaptive effort to self-medicate anxiety symptoms (Conrod, Pihl & Vassileva, 1998; Stewart, Peterson & Pihl, 1995). Yet there is evidence that searching for intense and novel experiences lead those high in sensation seeking to seek out these sensations by using substances (Conrod, Pihl, & Vassileva, 1998). Impulsivity, which is often characterised as a rapid response to cues for potential reward and a minimal tolerance for negative emotion (Zuckerman & Kuhlman, 2000), has been linked to substance use when it can provide positive reinforcement in the face of a lack of inhibition due to potential negative consequences (Sher, Bartholow, & Wood, 2000). Thus, the manifestation of these personality traits in the substance using participants highlights the presence of these individual characteristics across samples. However, it could also be argued that introversion/hopelessness and impulsivity are possible features associated with the profile of Brazilian people that decide to immigrate to the UK as results showed that these personality traits are slightly higher in the UK sample. A possible explanation for this latest assumption is that people that are high in introversion/hopelessness might



see in the opportunity of moving to another country a form of trying to improve their psychological well-being. In a similar note, high impulsive individuals might be less reluctant to move abroad due to their predisposition to act without long and careful considerations and to tendency for choosing short-term gains over long-term ones (Whiteside & Lynam, 2011)

Furthermore, positive and negative affect showed some trends between country of residence and substance use status. For example, while participants in Brazil that use substances scored higher in positive affect than non-substance use participants, in the UK, non-substance use participants were the ones to score higher on this variable.

Such patterns might support the assumption that Brazilians in the UK are more emotionally distressed than their counterparts in Brazil who also use substances.

Reasons for this might include the feeling of loneliness and confusion about cultural identification. Yet, the fact that those substance users from both countries scored lower in negative affect than non-substance users might reflect differences in lifestyle.

Findings from the qualitative analysis revealed that there was a similar distinction across country of residence between substance using and non-substance using participants regarding lifestyle preferences. For example, in both countries those participants that tended to use substances demonstrated having a much more active lifestyle in terms of having different types of friends and engaging in more activities. Furthermore, substance using participants from both countries indicated adopting more diverse types of coping mechanisms, which in turn might contribute to dealing more effectively with broader types of adversities and decreased negative affect. In the case of Brazilian substance users in the UK, findings from the qualitative study also suggest that the fact that their reasons for moving to the UK are more inclined to aspects of gaining things in life rather than necessity might help them to join more

what Britain has to offer. In front of this, negative feelings might be easily dismissed than those non-substance using participants that see Britain mostly with the views of sorting out problems. Nevertheless, it could also be argued that those Brazilian immigrants that are up to new experiences and gains in the UK are more prone to end up using substances due to this novelty-seeking characteristic.

By analysing the potential direct impact that the psychological variables cited above have on predicting alcohol and drug use, findings suggest that they tend to predict differently after controlling for participants' country of residence. Specifically, there is evidence that supports the hypothesis that while substance use in Brazilians in the UK is motivated by negative reinforcement processes (e.g. coping motives), in Brazil it is motivated by positive reinforcement processes (e.g. enhancement motives) (Cooper, Agocha, & Sheldon, 2000). This evidence is based on findings presented in Chapter 5 that revealed that those participants in the UK prone to introversion/hopelessness and anxiety sensitivity are at the greatest risk of misusing substances, whereas in Brazil the highest risk is among those high in the personality trait sensation seeking. On the other hand, drinking behaviours in participants in the UK were driven by a positive reinforcement mechanism due to the presence of enhancement motives, however, binge drinking was predicted only by social motives. In Brazil, engagement in any form of drinking behaviour was significantly predicted by social motives. Thus, it seems that there is a positive reinforcement attitude regarding alcohol consumption coming from the Brazilian culture, however, while in Brazil this is associated with external motives (e.g. drinking to celebrate a special moment with a friend), in the UK, drinking is only externally motivated when it involves binge drinking. This latest assumption is also supported by findings from Chapter 6 where a participant describes social

engagements in the UK as usually involving the fast consumption of high quantities of alcohol.

Despite differences in resilience, impulsivity personality traits, positive and negative affect, and drinking motives for conformity and coping among Brazilian substance users in both the UK and Brazil, none of these variables appear to have predictive patterns in terms of substance use. This lack of effect in both samples suggests that these factors might not have a direct impact on substance use in Brazilian populations. This can be contrasted to findings in British populations where this effect is well established (Frisher et al., 2007). However, it is possible that the relationship between these factors and substance use in Brazilians might correlate with other factors that have a strong influence on substance use. For example, impulsivity might be correlated with factors related to genetic conditions, such as sex and hormonal status, reactivity to nondrug rewards, and early life experiences (e.g., abuse/impoverished rearing conditions, prenatal drug exposure) (Perry and Carroll, 2008). Low levels of resilience might be a risk factor for substance use only when early life experiences such as growing up with parents who are substance misusers, are factored into the analyses (Frisher et al., 2007). Similarly, drinking motives for conformity and coping might be less strongly related to use per se, but more strongly predictive of drinking problems (Cooper, et al. 2013, Hauck-Filho, et al., 2012).

In addition to the variables explored in the quantitative study, the influence of peers and families on participants' substance use behaviours was revealed in the qualitative analysis. Substance use participants from both countries were shown to be influenced by friends, but the experience of growing up with a substance misuser in the family was predominant in the sample from Brazil. In the UK sample, almost all the substance using participants recalled having experienced difficulties growing up in Brazil, these

difficulties in childhood were not, however, related to parents' substance use. It could be argued in this way that the childhood adversities experienced by the Brazilian immigrants might underpin their motivation for emigrating from Brazil and, as is well documented in the literature, increase risks of longer term substance use in adulthood (Green et al., 2010; Kessler et al., 2010; Madrugá et al., 2010; Molnar, Buka & Kessler, 2001). In the same way, it could also be said that such early life adversities might be related to the lower resilience and some aspects of psychological profiles of the Brazilian immigrants in the UK.

Finally, it is also important to mention the few protective factors emerging from the qualitative analysis. Similar to a previous study conducted in Brazil, faith beliefs and involvement in religious activities proved to be a protective factor for substance use in Brazilians (Bastos, et al., 2008). Another factor shared by both samples was the involvement in sport activities, however, although this factor was not sufficient to protect participants from using substances, it appeared to delay the age of initiation, in particular among male participants. On the other hand, negative outcome expectancies revealed to be a protective factor against substance use for female participants only independent of country of residence. The only factor that showed not to be equally prevalent across both samples was the financial cost involved in the use of substances. This factor proved to protect male participants in the UK sample. Reasons for that might lie in the strong economic motivation that brings some Brazilian immigrants to the UK, the high cost of living in Britain, as well as in the high price in the UK of substances like alcohol, cigarettes, cannabis, and cocaine when compared to the market in Brazil.

### 7.1.3 Association between Psychological Variables and Acculturative Outcomes

Findings from the quantitative analysis support the hypothesis that the integration acculturative strategy proposed by Berry et al. (1985) would be associated with the highest number of positive psychological outcomes. In particular, those participants that are more likely to integrate into the British culture showed to be more psychologically robust as high levels of integration were associated with high levels of positive affect and lower levels of introversion/hopelessness and drinking for social motives. Conversely, separation and marginalisation strategies were associated with more negative psychological outcomes. For example, low levels of positive affect and high levels of the sensation seeking personality trait were significantly associated with high levels of separation (high attachment to the Brazilian culture and low attachment to the British culture). For those few participants that were not attached to either Brazilian or British culture, high levels of anxiety and drinking for enhancement motives were presented. There were non-significant associations between the psychological variables measured and assimilation acculturative strategy. Furthermore, none of these acculturative strategies had a direct significant effect on patterns of substance use.

There are several reasons as to why integration acculturative strategy might lead to better psychological outcomes than the other acculturative strategies. Among these reasons is the possibility that integrating immigrants are more adaptive because they share a common identity with the hosting people and are at the same time able to distinguish themselves from them in a positive way (Gaertner & Dovidio, 2000). Another possible reason is the social and cognitive flexibility caused by the involvement with two cultures. In result, integrating immigrants have a greater range of behaviours and competences to choose from which may buffer against the

maladjustment that can often characterized the acculturative experience (Padilha, 2006). Moreover, integration can be highly positive to the wider society since that integrating individuals have skills (e.g. bilingualism, cultural frame switching, and interfucultral sensitivey) that are necessary for success in an increasingly globalisezed society (Nguyen & Benet-Martinez, 2007).

Associations between length of residence and any of these four acculturative strategies, were also analysed in this study. From these analyses, it was found that integration strategy is not related to length of residence. Assimilation and separation, on the other hand, were predicted by length of residence. More years residing in the UK predicted assimilation, whereas fewer years predicted separation. Such findings are particularly interesting as it shows that living for a long time in the UK does not necessarily mean that Brazilian immigrants will adopt the integration acculturative strategy.

Findings also support the hypothesis that the stress caused by the acculturative process is associated with negative psychological outcomes. The acculturative stress caused by discrimination, threat to cultural identity, lack of opportunities, and language barriers, was associated with negative psychological outcomes such as high levels of negative affect and the personality traits introversion/hopelessness, anxiety sensitivities, and impulsivity. Findings also indicate that living in the UK for a longer period of time is associated positively with threat to cultural identity. Moreover, this threat to cultural identity was the only type of stress to significantly predict substance use. Thus, findings from this analysis suggest that those Brazilians residing in the UK for a longer length of time tend to worry more about losing or not having a cultural identity than those who reside in the UK for a shorter period of time. On the other hand, stress caused by language barriers tends to decrease with a longer length of residence, however, after living in the UK for more than 15 years it seems that the

pressure to be fluent in the English language may cause similar stress to those participants who are newer to the UK. A possible explanation for the latter pattern is that individuals living in the country for several years might be under more pressure to speak the English language perfectly.

#### **7.1.4 The Effect that the Stress Of Negotiating More than One Set of Values, Norms, And Identities has on Patterns of Substance Use**

Findings from the current research significantly supports the hypothesis that the stress caused from negotiating more than one set of values, norms, and identities are among the factors underlying substance use in Brazilian immigrants in the UK. As indicated in the section above, threat to cultural identity was revealed to be the only acculturative variable to directly predict substance use in the UK sample and to also mediate the use of substances amongst those highly integrated into the British culture. Broadly speaking, threat to cultural identity refers to the generally unavoidable psychological distress experienced by members of the acculturating group in dealing with conflicts between different systems of values, beliefs and behaviours that they are exposed to when adapting to culturally specific values and patterns of living (Berry et al., 1987; Inman et al., 2002; Portes & Rumbaut, 2001). Findings from the current study show, however, that the high stress caused by this threat to cultural identity is not associated with being new in the UK, but instead might be highly influenced by the ongoing conflict that Brazilians experience while trying to maintain their own cultural heritage despite being more aligned to the customs and beliefs of another culture. In addition, findings suggest that the embracing of British cultural norms, when adopting the integration acculturative strategy, will only be a risk for substance use when Brazilian immigrants are experiencing threat to their cultural identity. The impact that cultural

threat has on the outcomes associated with the adoption of a particular acculturative strategy was also reported by Baysu, Phalet, & Brown (2011). In their study of people of Turkish background living in Belgium, their study found that when perceived cultural threat was low, integration acculturative strategy was related to better academic achievement than other acculturative strategies. However, when perceived cultural threat is high, separation or assimilation was associated with better performance. The authors thus concluded that the success of a particular acculturative strategy might depend on the level of cultural threat that minority members' experience.

Findings from the qualitative study also support the presence of this cultural conflict among substance using participants. However, because there was limited evidence suggesting that participants from the qualitative study were integrated into the British society, these results challenge the quantitative findings about threat to cultural identity being experienced highly by those integrated into the British culture. It is possible to argue in this context that the stress caused by threat to cultural identity can also occur independently of high contact with British culture. It might be that in an effort to meet their personal and social needs, Brazilian immigrants might choose to socialise with other immigrant groups who share similar experiences to them in the UK.

Thus, in addition to identifying a particular aspect of how the stress caused by the acculturative process towards changes on patterns of substance use in the Brazilian immigrants, this finding about threat to cultural identity also reveals that stress caused by acculturation is not a feature of a particular period of the adaptation process. Instead, it is a type of stress that can continue and/or arise over the life-course of the immigrant, regardless of having high or low contact with the host culture.



### **7.1.5 The Impact of the Acculturative Process on Attitudes, Behaviours, and Values Regarding Alcohol and Substance Use.**

A specific objective of this thesis was to examine the extent to which attitudes, behaviours, and values regarding alcohol and substance use amongst the Brazilian immigrants in the UK, approximate or are resistant to the influences of those held by the majority of British population as a consequence of the acculturative process. The analysis from Chapter 6 suggests that based on the patterns of attitudes, values, and behaviours, uptake or retention of substances occurs in a much more complex way than the suggested hypothesis that shifts are likely to vary according to levels of contact with the host culture. For example, attitudes towards substance use were shown to shift towards the UK attitudes in the majority of participants from the qualitative study. This is particularly the case with normative beliefs about substance use overall, which is highly predominant amongst the Brazilians in the UK, independently of whether they are a substance using participant or not. Concurrently, according to participants there is less negative stigma attached to drug use in British society than in the Brazilian society. In this instance, it might be that Brazilian immigrants are exposed to attitudes and views about substance use in the UK that changes their views about substance use from less acceptable to more acceptable ones. A range of factors might contribute to this shift including a high availability of different types of substances, the easier access to drugs, the experience of seeing more people consuming substances, and the role of media sources in emphasising the presence of drugs in Britain. Furthermore, attitudes towards gender relations might also change under the acculturative process. For example, while women and men have equal rights in both the UK and Brazil, there is a more distinct traditional cultural environment regarding gender relations in Brazil, where attitudes toward women drinking are less

permissive. In line with this are results from Chapter 5 that revealed that while in Brazil substance use behaviours were more frequent in male participants, in the UK, significant gender differences were not observed. In this way, it might be that Brazilian woman in the UK start to reject proscriptive views towards females drinking in the face of a more permissive dominant culture.

There is also convincing evidence suggesting that there is a sense of freedom attached to living in the UK, particularly London. Findings from the qualitative study show that for many Brazilians, to be in the UK means to be 'open minded' to different life styles. As a consequence, very often Brazilians tend to detach themselves from their cultural values and norms as a form of being less conservative in a society that, they believe, is very liberal. Use of substances in this context might play a pivotal role as it represents the disconnection of previous cultural values to the new ones. It is not possible to say though, that these Brazilian immigrants are endorsing values associated with British culture as evidence demonstrates the majority of the Brazilian participants in the qualitative study reported low contact with British people. As a result, it is very likely that their views of how the British society functions, are in fact unrealistic, imaginary, and developed based mostly on their experiences of familiarity and relations with other immigrants and members of ethnic groups rather than the majority of British people.

Similarly, acculturative changes in the behavioural domain were also observed amongst the Brazilian immigrants. The fast consumption and high quantity of alcohol consumed per episode is an example of a drinking style adopted in the UK. Another change in drinking style was the role of alcohol in social events. In particular, findings from the qualitative study shows that while in Brazil getting intoxicated seems to be a consequence of a good night interacting with people, in the UK it seems that

individuals have to get intoxicated to be able to enjoy the occasion. Acculturation also appears to affect drug taking behaviours. This includes, for example, an increase in those Brazilian immigrants that used to smoke cannabis in Brazil that end up using other types of drugs in the UK, especially recreational drugs. By comparing both the UK and Brazil samples, it appears that participants who smoke cannabis in Brazil are less likely to start using recreational drugs than those from the UK sample. In addition, there is evidence showing that going to parties in the UK is associated with illegal drug use, while in Brazil it mostly involves consuming alcohol only. Thus, it could be argued that the UK nightlife is likely to favour the consumption of other drugs much more than in Brazil. As a consequence, Brazilian immigrants are more susceptible to adopting this behaviour while living in the UK. Lastly, there is no convincing evidence suggesting that Brazilians in the UK might change their values and behaviours about injecting drugs. The injecting of heroin, for example, has a strong negative stigma attached to it across both samples.

## **7.2 IMPLICATIONS FOR THEORY AND PRACTICE**

Over the last 15 years there has been a great increase in the number of research studies investigating the effects of acculturation, with many of these specifically focusing on substance use. The majority of research has been led though by US researchers examining Black and Hispanic populations (e.g. Caetano, Ramisetty-Mikler & Rodriguez, 2009; Johnson, VanGeest & Cho, 2002; Karriker-Jaffe & Zemore, 2009; Pokhel et al., 2013; Romero, Martins & Carvajal, 2007). In the UK, a more limited number of studies on acculturation and substance use have been carried out. The most revealing studies on substance use under the migratory and/or ethnic group context

tend to focus greatly on the social pressures that individuals are exposed to, rather than the changes that acculturation tends to cause (e.g. Beddoes et al., 2010; Das-Munshi et al., 2014; Fountain et al., 2009a; 2009b; 2009c; Garaphic, 2011; Patel & Williams, 2010; Wright & Gammampila, 2012). In addition, the few studies in the UK reporting an association between acculturation and changes in patterns of substance use have been concentrated mostly on describing the associations between factors, rather than exploring the transformations and constraints that those people from different cultural backgrounds do experience by living in Britain (e.g. Hurcombe, Bayley & Goodman, 2010).

The combination of the findings presented in this thesis stresses the importance of domain specificity in acculturation research while exploring changes in patterns of alcohol and substance use in members of ethnic groups in the UK. Doing it so directly acts upon the wide range of components involved in both new and established forms of migration, as this can produce an in-depth understanding of the construction of new cultural groups and the development of new and mixed identities. By understanding the dynamics involved in the construction of the new cultural groups and identities, it is possible to gain a greater insight into the mechanisms underlying the combination of variables that arises through the acculturation process while considering those variables brought by the immigrants from their mainstream culture. As a consequence, intervention programmes aimed at tackling substance use in members of minority ethnic groups will be supported by evidence that generates ways of developing much broader frameworks in terms of appreciating the combination of factors that affects people's lives, rather than following simple ethnicity-focused approaches.

However, to be able to achieve this, research on acculturation and substance use needs

to go beyond simplistic and unidimensional conceptualisations of acculturation, which is usually addressed by using proxy variables (e.g. generation status, length of residence, and language acquisition) as assumptive means of determining the extent of acculturation. This thesis is in-line with recent research that proposes a conceptualisation of acculturation framed within the context of real acculturation change (e.g. Abraido-Lanza et al., 2006; Hunt et al., 2004; Lopez-Class et al., 2011, Salant et al., 2004). In this real context, acculturation does not directly reflect individuals' beliefs or attitudes based on how acculturated or not they are to the dominant culture, but instead it reflects a dynamic, multifaceted, and complex process in which individuals and communities are constantly changing. Hence, the methodology adopted in this research offers a responsive approach to the actual dynamics of acculturation as it addresses key determinants of how acculturation might impact on patterns of substance use amongst Brazilian migrants, by exploring in-depth sociocultural changes, the mixing of traditional and adopted cultures, and adaptation across time.

Thus, the investigation of substance use in Brazilian migrants in this thesis provides a model and evidence for future research that aims to address substance use in the large number of minority ethnic groups in the UK. Furthermore, findings emerging from this research have the great potential to impact on the development of cultural competencies across both prevention and treatment programmes. At the community level, for example, this research generates considerable information about the profile of members of the Brazilian community at risk of developing substance use problems, as well as information about the most commonly used substances and motivations behind substance use. This evidence can be used by local governments from the areas with large numbers of Brazilian migrants, to aid them in working with community-

based organisations (e.g. Casa do Brasil in Londres and the numerous Brazilian churches spread across the UK) and non-governmental organisations in creating and delivering high-impact prevention programmes and information about support agencies for substance users.

Much has been discussed in the last decade about this multi-agency partnership approach as it is the ideal way to access, consult, and assess the service needs of hard-to-reach groups (e.g. Lenette & Ingamells, 2015; Fountain et al. 2003; Hurcombe et al., 2010; Patell, 2000), and to date there is no service available to the Brazilian community in the UK based on this approach. Evidence from the report about the Latin American communities in London (McIlwaine et al., 2012) shows, for example, that Brazilians and Bolivians are the most irregular users of GP services and the main users of voluntary health advocacy projects in London for people excluded from mainstream provision. Hence, the development of such services seems to be a way forward in tackling substance use in the Brazilian community. This type of service can also be developed in partnership with associations and communities of people from other Latin American backgrounds, as they hold great cultural and social similarities with Brazilian people and are also largely excluded from public health services in the UK (McIlwaine et al., 2012). Inevitably, apart from addressing substance use problems, approaches focusing on these multi-agency partnerships will also strengthen social capital in these communities as it will directly support social cohesion and build resilient communities and individuals.

As already stated, the other practical implication of this study lies in the treatment domain. In particular, findings emerged here that can be applied to staff training programmes as a form of enhancing cultural sensitivities in those working in multi-

ethnic populations. Awareness of the cultural values and identities, for example, can assist practitioners' decisions regarding treatment approaches and goals. Evidence shows that services taking into account the cultural competencies of the people they serve are revealed to significantly improve service delivery, retention, and outcome (Fountain et al., 2003; Kazarian & Evans, 1998).

As a final note, it is worth returning to the fact that the issues of substance use in members of minority ethnic groups that characterise the new social formation of the UK migratory context has been much neglected in the UK literature. Reasons for this might be influenced by a lack of understanding about how to address the growing size and complexity of the migrant population (Vertovec, 2011). Therefore, information that acknowledges the dynamics involved in the formation of these new social groups is key to creating effective practices to tackle substance use problems in members of ethnic groups in the UK. A new vision of policies and practices that embraces this role is critical, as commented on by Zetter et al. (2005):

*'Policy-makers and practitioners should take account of new immigrants' 'plurality of affiliations' (recognizing multiple identifications and axes of differentiation, only some of which concern ethnicity), 'the coexistence of cohesion and separateness' (especially when one bears in mind a stratification of rights and benefits around immigrant categories), and in light of enhanced transnational practices - the fact that 'migrant communities, just as the settled population, can "cohere" to different social worlds and communities simultaneously' (Zetter et al., 2005, pp. 14-19).*

Findings from this research offer evidence to support the development of initiatives aimed at overcoming the dilemma of working within this "super-diverse" migratory context in the UK. In particular, generic substance use services can fully benefit from the findings related to threat to cultural identity as this was shown to be a major risk factor for substance use in those Brazilian immigrants who are experiencing psychological conflicts due to the stress of dealing with different cultural affiliations.

### 7.3 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Whilst the mixed-methods nature of this research mitigates a number of potential limitations and the fact that all the measures adopted in the quantitative study were tested to minimise the possibility of measurement error, there are some methodological considerations that need to be taken into account when interpreting the findings. One limitation lies in the recruitment of participants. While attempts were made to try and obtain a random sample, the majority of the participants in the UK sample were recruited in the Greater London area. Consequently, the findings should be interpreted with caution and not generalised to the overall Brazilian population in the UK without further research. In addition, although data gathered in the UK came from Brazilian immigrants originally from the five geographic regions of Brazil, it would be valuable to replicate these findings with a larger sample in each of the five regions of the country, as in Brazil data was mostly gathered in the Southeast area.

Demographically, this study was not originally designed to examine regional differences in the sample population. It is important to consider that Brazil is a large country with distinctive cultural regionalism according to different geographic areas and, as indicated in Chapter 2 (Subsection 2.5) patterns of substance use can vary across regions (Abdalla et al., 2014; Madruga et al., 2012; Pinsky et al., 2010). This study was also less than optimal with respect to analysing internal migratory movements in Brazil. In the past 50 years, Brazil went through an accelerated process of urbanisation that shifted the country away from a rural society to one in which more than 80% of the population live in urban areas (i.e. more than four in every five Brazilians now live in cities) (Victoria et al., 2011). This process of urbanisation has been considered a significant determinant of health in both the Brazilian and



international literature (e.g. Kjellstrom & Mercado, 2008; Victoria et al., 2011; Vlahov et al., 2007). Traditionally, urbanisation has been linked to development and health improvements, however, in the face of rapid and disorganised urbanisation, cities tend to lack resources and time to accommodate and employ the growing population. As a result, living in poor conditions and fighting for a better quality of life lead newcomers to be highly exposed to a range of social determinants of poor health (Vlahov et al., 2007). In Brazil, this rapid and disorganised feature of urbanisation has led to high rates of unemployment, poverty, and inequality across every city in the country. Today, there is a large body of evidence indicating associations between these socio-economic factors and substance use problems. Nevertheless, it is possible that changes in patterns of substance use and changes in the psychological predictor factors in the UK sample, might have been initially influenced by internal migration in Brazil, especially amongst those participants that experienced the process of urbanisation prior to migrating to the UK. Future studies should look into the potential effects that regionalism and urbanisation in Brazil might have on patterns of substance use to be able to gain a broader picture about the influence that other cultural and social transformations might have on migrants' lives.

Further demographic limitations involve the over-representation of female participants in the sample from Brazil and the large age variation across both samples. Although tests of gender differences reported in this thesis indicated no notable effects, it is acknowledged that the over-representation of female participants in the Brazil sample causes difficulties in terms of generalisation, and it is recommended that greater efforts are made in future studies to use samples with more balanced gender ratios. With respect to the age-related concern, it might be that results from the quantitative study could be different if a narrower age range was examined. For

example, the younger participants might be more vulnerable to substance use because they struggle to cope with their parents' cultural norms while trying to fit into new peer groups in the UK, whereas older participants might be less reluctant to adapt to the British culture and so are less distressed regarding adaptation. Future research is needed to determine the extent of the role that age differences in adult Brazilian migrant populations plays in the association between acculturation and substance use behaviours.

On a similar note, limitations in the number of variables and effects that can be studied within one project will always exist. For example, in the acculturation domain there are a number of variables that can influence immigrants to endorse certain acculturation strategies over others, such as national acculturation policies, social support, and residential concentration (Berry & Sam, 1997). Furthermore, income, education, occupational status, and socio-economic status have all been shown to be correlated with having a preferential acculturative strategy (e.g., Ataca & Berry, 2002; Berry, Kalin & Taylor, 1977; Lim et al., 2002). Studies on health behaviour changes in members of minority ethnic groups in the UK, also suggest that there are many other variables that play a part in acculturation models. Navas et al. (2005) suggest, for example, that social support and family networks are important variables when exploring the impact that socioeconomic status has on daily life health behaviours of minority ethnic groups. It is possible that the type and the quality of network will vary with length of residence in the Brazilian immigrants as a consequence of differing familiarities with the UK environment, and these relationships could well influence substance use behaviours. It is also possible that these network ties will vary according to the degree to which Brazilian immigrants maintain activities, and the connections that link them with communities outside of Britain. Nonetheless, a connected aspect worthy of future

study is how these networks operate under this increasingly normative transnationalism that characterises the present migratory groups in the UK. As stressed by Vertovec (2004), the enhancement of transnationalism is causing a substantial transformation in several social, political, and economic structures and practices among communities worldwide. Yet, while much academic work has been devoted to understanding this phenomenon, there has been much less attention on understanding the relationship between transnationalism, the adoption of acculturative strategies and the social network dynamics. Concurrently, studies exploring the impact that the relationship between these topics has on patterns of substance use in the new type of immigrants in the UK remain open for future investigation.

Another potential confounding factor in the quantitative phase is the phenomenon of socially desirable responding. This is a major concern for all self-report measures, but especially for substance use screening scales as underreporting of alcohol consumption is especially common among survey participants (Feunekes et al., 1999). The inclusion of a scale measuring a tendency to give socially desirable answers may have helped to detect, minimise or correct for such responding bias. Additionally it is worth stating that a range of statistical tests was carried out in the quantitative study and this might have placed some findings at risk of error. Lastly, the quantitative data presented here are cross-sectional meaning causality can only be inferred, as the extent to which the exposure preceded the outcome is unknown. Thus, results from the quantitative analysis including the directional associations of the path model presented, are speculative in nature. Inclusion of a biological measure of substance use in future studies has the potential to lead to more robust causative models. In particular, the investigation of epigenetic modifications through biological specimen collection

(saliva) procedures, can offer an understanding of both genome function and environmental effects on the individual genomes of the cells. It is generally accepted today that substance use problems, especially drug addiction, is a very complex phenotype in which individual response to an addictive substance is the product of an interaction between genetic and environmental factors (Agrawal et al., 2012). Data from human studies and animal models has provided evidence that environment can modify epigenetic marks of the genome and, consequently, alter gene function (Goldberg et al., 2007). Early life adversities such as sexual abuse/harassment and physical trauma, for example, have been linked to drug and alcohol problems later in life (Dube et al., 2003; Felitti et al., 1998). Therefore, the identification of possible modification of epigenetic marks in those individuals that experienced high levels of adversities prior and/or during the migratory process to the UK might improve significantly the ability to tailor the biopsychosocial transformations that immigrants are exposed to.

Finally, in the qualitative phase, the emphasis and aim was to understand the lived experiences of Brazilians residing in the UK and those residing in Brazil. The usual limitations of the extent to which qualitative findings can be generalised apply here. In addition, an interview schedule was designed to facilitate flow in participants' description of their experience, through inclusion of probes and prompts. This allowed for more detailed exploration, however, being an inexperienced interviewer, some opportunities for clarification were inevitably missed during the process of the interviews. The researcher was also aware of several potential biasing influences upon her interpretation of the qualitative results. In particular, the potential influence of her own experience of being a Brazilian immigrant in the UK. Guidelines to validate the findings from the Thematic Analysis were carefully followed to further eliminate

potential biases, but despite this procedure, a greater level of neutrality during the qualitative phase might have been achieved if the data were collected by different interviewers.

## 7.4 CONCLUSIONS

This study provides evidence of the dynamics involved in substance use behaviours amongst Brazilian immigrants in the UK. The results are consistent with the main hypotheses of the study and are generally supported by previous studies carried out in the field of acculturation and substance use. After accounting for the limitations described above, the following major conclusions are drawn:

- Changes in patterns of substance use have occurred in Brazilians by living in the UK, including an overall increase in the frequency of substance use, consumption of a broad range of substances, and adoption of binge drinking behaviours. Such transformations are influenced by attitudes, values, and behavioural changes.
- Broadly speaking, findings revealed that while substance use in Brazilians in the UK is motivated by negative reinforcement processes (e.g. coping motives), in Brazil it is broadly motivated by positive reinforcement processes (e.g. enhancement motives).
- The only factors that showed to equally predict substance use in by both samples were drinking for social motives and gender, whereas resilience, impulsivity, positive and negative affect, and drinking motivated by conformity and coping had no predictive influence on patterns of substance use in either of the samples.

- A relationship between psychological and acculturative variables was identified. Specifically, integration acculturative strategy was the acculturative variable associated with the most positive psychological outcomes. Length of residence itself does not predict the adoption of the integration strategy.
- The stress caused by threat to cultural identity and dealing with more than one set of cultural values and norms was indicated to be the major predictive factor for Brazilian immigrants in the UK to use substances. Findings also revealed that high contact with both British and Brazilian cultures will only predict substance use when such acculturative stress moderates this relationship.
- Brazilian immigrants that are new in the UK are at risk for substance use independent of any acculturative strategies or stresses.
- The impact of acculturative stress on psychological factors and patterns of substance use is not only experienced during the settlement process to the UK, but it can be also felt in other phases of the life of a Brazilian immigrant.

## **APPENDICES**

## Appendix 1

### Article: Psychometric Properties of the SURPS Brazilian Version

Int J Ment Health Addiction  
DOI 10.1007/s11469-014-9522-1

#### Psychometric Properties of the Substance Use Risk Profile Scale - Brazilian Version

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**Abstract** The Substance Use Risk Profile Scale (SURPS) was developed to screen four types of personality risk types related to substance use disorders (hopelessness, anxiety sensitivity, impulsivity, and sensation seeking). In this study, we evaluated the psychometric properties and reliability of the Brazilian Portuguese adaptation of the SURPS. It was also explored in this study whether the four personality types measured by the SURPS would differentially associate with motivation for specific psychoactive substance use. A cross-sectional design study was adopted in which 325 Brazilian participants took part (mean age of 27.82, SD=5.65). Internal consistency and factor model evaluation of the scale were carried out. Results indicated the SURPS Brazilian version has good internal consistency and is a valid instrument for measuring four distinct personality dimensions within the Brazilian population (RMSEA=.05; SRMR=.07; CFI=.90). Additionally, results suggested that the hopelessness, anxiety sensitivity and sensation seeking subscales were associated with preferential substances of use.

**Keywords** Substance use disorders · Personality traits · Confirmatory factor analysis

The harmful use of alcohol and drugs is a major public health problem that affects economies, families and individuals' lives in countries throughout the world. In Brazil, it seems that the problem of alcohol and substance misuse has been exacerbated in the last few years due to shifts in patterns of alcohol and substance use in the majority of population groups. Alcohol consumption for example was found to have increased 31 % in the Brazilian population from 2006 to 2012 (Laranjeira et al. 2012) and the country was identified as one of the emerging nations where the use of stimulants such as cocaine is increasing (United Nations Office on Drugs and Crime 2012). Similar to other developing countries, Brazil today requires urgent and effective strategies to prevent and treat the problematic misuse of and dependence on substances. In order to develop appropriate interventions, a clear understanding of the

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Published online: 18 September 2014

 Springer



underlying factors linked to the susceptibility of Brazilians to use substances is required and, as a means to do so, instruments tailored to measure these factors in the Brazilian culture is called for.

There is today a substantial epidemiological literature on factors that are considered as risky for the development of substance use disorders (SUDs) and a particular area that has received a great deal of attention in this field is the study of personality dimensions. One explanation for this is that personality has been shown to be a useful approach to understanding individual differences in the susceptibility to SUDs (Cloninger 1987; Conrod et al. 2000a, b; Gotham et al. 1997; Wolff and Wolff 2002) and so, an important approach to predict the development of SUDs in those individuals vulnerable to that (Lejuez et al. 2006; Krueger et al. 2007; Hopley and Brunelle 2012). Founded on this, Conrod et al. (2000a, b) introduced a typology for abusers of many substances based on personality dimensions. In this model, the four personality types – anxiety sensitivity (AS), introversion/hopelessness (I/H), sensation seeking (SS), and impulsivity (IMP) – are associated with specific motives to use substances, which in turn may result in a particular choice of substance misuse.

This motivational personality model has been developed based on clinical and non-clinical cases and found support in several other studies (i.e. Castellanos-Ryan and Conrod 2011; Hopley and Brunelle 2012; Gudonis et al. 2009). The neurotic personality trait for example, which is characterized by depression and anxiety proneness, has been shown to be linked with excessive use of alcohol through negative reinforcement motives as a means of coping with negative affectivity (Comeau et al. 2001; Cooper et al. 1995). There is also evidence supporting different negative reinforcement motives for those individual depressed and those prone to anxiety (Grant et al. 2007). Research indicated that those highly depressed are more likely to be attracted to analgesic properties (i.e. prescription opiates) (Stewart and Devine 2000) and the analgesic effects of alcohol (Rounsaville et al. 1991) than those that are not depressed. As depression-prone people are likely to self-punish themselves, the use of such substances may server as a means of inhibiting the effects of this punishment. By contrast, individuals prone to anxiety sensitivity have been shown to be attracted to alcohol, anxiolytics and other prescription drugs as a maladaptive effort to self-medicate anxiety symptoms (Bruce et al. 1995; Conrod et al. 1998; Stewart et al. 1995). Yet sensation seeking and impulsivity have been shown to be associated with substance use for enhancement of positive affect. There is evidence that searching for intense and novel experiences lead those high in sensation seeking more likely to ‘poly-substance’ use such as alcohol, cannabis, and hallucinogens due to the psycho-stimulant proprieties of these substances (Conrod et al. 1998). Impulsivity, which is often characterized as a rapid response to cues for potential reward and a minimal tolerance for negative emotion (Zuckerman and Kuhlman 2000), have been linked to alcohol and stimulant drug dependence when such substances provide positive reinforcement in the face of the lack of inhibition due to potential negative consequences (Sher et al. 2000; Cloninger 1987; Conrod et al. 2000a, b).

To measure this four-factor personality risky model, Conrod and Woicik (2002) designed the Substance Use Risk Profile Scale (SURPS). The SURPS is a relatively short self-report instrument to assess the relevant four risk personality dimensions proposed by Conrod and colleagues (2000). The SURPS scale had shown validity and reliability across both clinical and nonclinical populations (Schlauch 2012; Woicik et al. 2009). Further, this scale has been considered to be an effective tool when conducting epidemiologic studies to assess the role of personality in substance use behaviours and comorbid psychopathology, as well as in personality-matching intervention programmes (Conrod et al. 2006; Conrod et al. 2008). Although reliability and validity of the SURPS was originally tested in North American populations, it has demonstrated cross cultural relevance through a few other studies including

one in Sri Lanka (Ismail et al. 2009), one in Hong Kong (Siu 2010) one with a population of French speakers (Castonguay-jolin et al. 2013) and another with Korean speakers (Saliba et al. 2014). In all those cross-sectional studies the SURPS demonstrated to be a valid construct for measuring personality risk for substance abuse in both adolescent populations (Ismail et al. 2009; Siu 2010; Castonguay-jolin et al. 2013) and adult populations (Saliba et al. 2014). In Brazil however, despite evidences that some personality traits play a role on substance misuse in the Brazilian population (see Almeida and Silva 2005; Natividade et al. 2012; Kessler et al. 2012; Terra et al. 2006) there is not, to date, an instrument that measures the relationship between the four personality types proposed by Conrod et al. (2000a, b) and substance misuse.

Thus, with the intention of facilitating and encouraging future studies on personality risk factors and substance misuse in Brazil using an instrument tailored for its own culture, the purpose of the present study is to evaluate the validity and reliability of a Brazilian version of the SURPS. We hypothesize that the Portuguese version of the SURPS will be a valid instrument for measuring four distinct personality variables (I/H, AS, SS, IMP). We also expect that each of the four personality variables will differentially associate with motivation for specific psychoactive substance use. Supported by Conrod et al. (2000a, b) motivational personality model for substance use, we expect that: a) high I/H to be associated with alcohol due to the analgesic proprieties; b) AS to demonstrate a higher motivation for drugs with sedative proprieties (alcohol and benzodiazepine); c) SS to be associated with cannabis; and finally d) IMP to demonstrate higher motivation for substances with stimulant effects (cocaine, MDMA, and amphetamines).

## Methods

### Participants

The sample consisted of 325 young adults with ages ranging from 18 to 40 years old (mean age of 27.82, SD=5.65) that participated in an independent study about predictors of alcohol and substance misuse in Brazilian residents in Brazil and Brazilian immigrants in the UK. The UK sample consisted of 164 participants (with age mean of 28.69, SD=5.65) and the sample in Brazil of 161 participants (mean age of 26.93, SD=5.75). Females comprised 54.9 % and 64 % of the sample in the UK and in Brazil respectively, and 59.4 % of the total sample. All participants were born in Brazil and indicated Brazilian Portuguese as their mother tongue.

Ethical approval and written informed consent were obtained before participation in the study; the participation was voluntary. Both in Brazil and in the UK there were online and printed versions of the questionnaire. In the UK participants were recruited through establishments in the Brazilian community in London (i.e. churches, associations responsible to give assistance to Brazilians immigrants in the UK, and Brazilian online forums). In Brazil, participants were recruited in the city of Porto Alegre with the help of the Center of Psychological Research on Risk Population (CEP-Rua) from the Universidade Federal do Rio Grande do Sul (UFRGS) in the associations where CEP-RUA conduct their researches.

### Measures

*The Substance Use Risk Profile Scale (SURPS)* The original SURPS was developed by Conrod and Woicik (2002). It consists of 23 items scale and four subscales that assess: a) I/H (introversion/hopelessness), a personality factor that reflects depression-specific pathways to substance use (e.g., “I feel that I am a failure”); b) AS (anxiety sensitivity), a personality factor

that motivates individuals to use substances for their anxiety-relieving effects (“It’s frightening to feel dizzy”); c) sensation seeking (SS), a personality factor that reflects thrill and danger seeking, which in turn increases psychological arousal (e.g., “I like doing things that frighten me a little”); and IMP (impulsivity), a personality factor that is characterized by a rapid response to cues for potential reward and a minimal tolerance for negative emotions (e.g., “I usually act without stopping to think”). Participants are asked to report whether they agree or disagree with statements using a 4-point Likert scale (1 “strongly disagree to 4 “strongly agree”). The number of items in AS, I/H, SS, and IMP are five, seven, six, and five, respectively. The items on the scale reflect both positively and negatively worded statements with negatively worded item responses requiring reverse scoring prior to analysis. A higher score reflects a greater likelihood of the presence of a particular personality factor.

*Type and Frequency of Substance Use* This was assessed by asking participants to indicate the frequency that they used the following substance during the past month: alcohol, sedative drugs (benzodiazepines), cannabis, and stimulant drugs (cocaine, MDMA, and amphetamines). Responses are rated on a 3-point scale (0=never used, 1=once or twice, 2=mostly every day).

#### Translation of the SURPS

The English version of the questionnaire was adapted to Brazilian Portuguese following guidelines proposed by Borsa and colleagues (2012). Hence, a team of four translators were involved in this process. In the first stage, two bilingual translators who were also native Brazilian Portuguese speakers and culturally informed blindly translated the SURPS from the original language (English) to the second language (Brazilian Portuguese). Subsequently, two other independent bilingual professionals back-translated into English the translated Brazilian Portuguese version. Finally, the four translators and the authors of the present study met to discuss the discrepancies and where differences in the original and the back-translated versions were found common consensus was obtained by joint agreement of all translators.

#### Data Analysis

A confirmatory factor analysis using maximum likelihood estimation (AMOS 18.0) was conducted to test the hypothesized four-factor structure of the Brazilian SURPS. Multiple indexes were used to evaluate the goodness of model fit, including:  $\chi^2$  test, Standardized Mean Square Residuals (SMSR), Root Mean Square Error of Approximation (RMSEA; Steiger and Lind 1980), Comparative Fit Index (CFI; Bentler 1990). Acceptable model fit was defined by the following criteria: RMSEA values below .06, SRMR values between .05 and .08, and CFI values between .90 and .95. The decision for using multiple indices lies in the possibility of gaining different information about model fit (i.e. absolute fit, parsimony correction fit, comparative fit). By getting acceptable indices from each model fit it will be possible to reach a more conservative and reliable evaluation of the model (Brown 2006).

To explore whether the four personality variables would differently associated with motivation for specific substance use, multivariate regression analysis (Enter method) was carried out. In this analysis, the SURPS subscale scores were used to predict scores on the frequency of alcohol and substance use.

## Results

### Statistic Assumptions

Prior to analyses, several statistical assumptions were evaluated to ensure that no violations would hinder the interpretability of the results. The sample was appropriate for the use of factor analysis as the subjects-to-variables ratio was 14.17. Normality was assessed using box plots and Mahalanobis distance and no univariate or multivariate outliers were found.

### Internal Consistency

The internal consistency was first calculated for each of four SURPS scales according to country of residence to assure that reliability of Brazilian SURPS is similar for both groups. For the Brazilian sample in Brazil the internal consistency values for I/H, AS, IMP, and SS were .76, .75, .69, and .77 respectively; whereas for the Brazilian sample in the UK were .78, .75, .69, and .63 respectively. When combining both samples into a unique sample the internal consistency values for I/H, AS, IMP, and SS were .77, .76, .69, and .70 respectively. These values were similar to those reported in the original study of Conrod and Woicik (2002) using an English speaking sample (with Cronbach's  $\alpha$  as .75, .80, .67, and .72, respectively).

### Factor Structure of the Brazilian SURPS

Results revealed that the four factor model fits the data with limitation as the comparative fit index presents slightly lower value than recommended,  $\chi^2=475.77$ ,  $df=224$ ,  $p<.001$ ; RMSEA=.06; SRMR=.07; CFI=.85. An inspection of localized areas of strain in this model indicated that 4 of the 6 reverse-worded items had strong correlation with each other error, 1–4, 1–7, 7–23 (MI ranging from 8.43 to 14.64), and the unique non-reversed item in the subscale I/H (item 17) had correlated error with the reverse item 20 (MI 11.83). Consideration of this outcome suggested that the covariance of these error items was likely due to a method effect stemming from having positive and negative items together. As indicated by Marsh (1996), reversed items often lead to problems, particularly poor model fit in factor models due to the likelihood of method effects increased with less verbose participants. Therefore, the four-factor model was re-specified including this error covariance as freely estimated parameters. This re-specification resulted in a significant improvement in model fit, ( $\chi^2$ ) 429.16/220=1.95,  $p<.001$ ; RMSEA=.05; SRMR=.07; CFI=.87, although overall fit was still unsatisfactory (CFI<.90). Fit diagnostics revealed the existence of other significant error covariance between items 8–21 and 14–21 in the AS subscale, 2–15 and 11–22 in the IMP subscale, and 3–16 in the SS subscale (MI ranging from 5.28 to 10.25). It was then decided to conduct another analysis allowing correlate the errors of these items. By relaxing the error covariance between these items the model fit provided acceptable indices, ( $\chi^2$ ) 378.53/215=1.76,  $p<.001$ ; RMSEA=.05; SRMR=.07; CFI=.90.

As the model with correlated errors possessed superior fit compared with their more constrained counterparts, we have chosen to retain these correlated errors and accept this model as the best one. The decision to consider that these correlated errors were appropriate for the Brazilian version of the SURPS is based on the following assumptions: a) the high likelihood of correlated errors in the I/H subscale is caused by the presence of reversed items; b) a few covariance are between items that share similar content (i.e. words 'scares' in item 14 and 'frightens' in 21 were translated to a unique Portuguese word, '*assustado*'); and (c) with 5 items in the AS and IMP subscales there are 10 potential correlated errors in each subscale yet



only permitted 2 in each, in the SS subscale there are 14 potential correlated errors yet only permitted 1, thus the model is far from being fully saturated of correlated errors. Table 1 shows the standardized factor loadings, internal consistencies, means, standard deviations and factor correlations for the four-factor model of Brazilian SURPS.

#### SURPS and the Frequency of Alcohol and Specific Drug of Use

Multivariate regression analysis was conducted to explore whether the SURPS subscale scores predict the frequency of specific substance of use. To conduct this analysis, only those participants who had reported having consumed alcohol and/or other substance in the last month were included. Two hundred and seventy participants remained from the total sample (mean age of 27.5, SD=5.65). Female participants comprise 57.4 % of remain sample.

Results in Table 2 showed that I/H was specifically related to higher frequencies of alcohol intake, but it was not related to sedative drugs and opiate use specifically. There was a significant relation between AS and high frequency of sedative drugs use, but not for alcohol intake. IMP showed not to be related to stimulant drugs and SS was found to be related to high frequency of cannabis use only. Multivariate regression analyses showed that use of alcohol was, as expected, predicted by both I/H and AS ( $p < .05$ ), with I/H providing a slightly stronger predictor ( $\beta = .15$ ) than AS ( $\beta = .14$ ). Sedative drugs were only predicted by AS ( $\beta = .20$ ;  $p < .05$ ) and cannabis by SS ( $\beta = .14$ ;  $p < .001$ ). Neither SURPS subscales were found to predict use of stimulant drugs.

#### Discussion

The purpose of the present study was to explore the psychometric proprieties and reliability of the Brazilian Portuguese adaptation of the SURPS. We also explored the underlying factorial model of Conrod and Woicik's (2002) model of personality risk for substance misuse. Results indicated that the validity and reliability of the Brazilian version of the SURPS were similar to Conrod and Woicik's (2002) original version. Furthermore, the similarity of the Brazilian version factor model reflects that all items within each of the subscales acted as indicators of the same constructs in our sample. These results were also similar to the ones found on previous studies exploring the psychometric proprieties of reliability and validity of the SURPS in populations in Hong Kong, Sri Lankan, and French and Korean speakers. Based on that, the present study largely supports the cross-cultural applicability of the twenty three items of the SURPS for the Brazilian population.

With respect to the association of SURPS subscales to preferential use of specific substances, results showed that I/H, AS and SS were associated with specific patterns of use, whereas IMP was found not to be associated with any. In line with previous findings (Krank et al. 2011; Woicik et al. 2009) we specifically hypothesized that I/H and AS would be associated with alcohol use, AS with the use of sedatives, SS with cannabis, and IMP with stimulant drugs (cocaine, MDMA, and amphetamines). Consistent with theoretical predictions then, in the concurrent analyses, I/H and AS indicated to be predictors of alcohol consumption, with I/H showing to be a slightly stronger predictor than AS. This pattern has been explained in other studies by the difficulty that those individuals high in neuroticism personality trait find in coping with negative affect. In addition, the feeling of hopelessness may trigger these individuals to relate to alcohol as a form of lessening the emotional pain associated with depressive symptoms. Our results also supported the association between AS and use of sedative drugs suggesting that the high frequency use of sedatives by those Brazilian

**Table 1** Standardized factor loadings, internal consistencies, means, standard deviations and factor correlations for the four-factor model of Brazilian SURPS

	I/H	AS	IMP	SS
17. Eu sinto que sou um fracassado ( <i>I feel that I'm a failure</i> )	.68			
4. Eu sou feliz ( <i>I am happy</i> )	.64			
7. Eu tenho fé que meu futuro será promissor ( <i>I have faith that my future holds great promise</i> )	.64			
13. Eu sinto orgulho das minhas conquistas ( <i>I feel proud of my accomplishments</i> )	.58			
23. Eu sou bastante entusiasmado(a) com o meu futuro ( <i>I am very enthusiastic about my future</i> )	.56			
1. Eu sou uma pessoa satisfeita ( <i>I am content</i> )	.53			
20. Eu sou uma pessoa agradável ( <i>I feel pleasant</i> )	.33			
10. Fico assustado quando meu coração bate diferente ( <i>It frightens me when I feel my heart beat change</i> )		.79		
14. Eu fico assustado(a) quando fico muito nervoso(a) ( <i>I get scared when I'm too nervous</i> )		.65		
18. Eu fico assustado(a) quando experiencio sensações corporais diferentes ( <i>I get scared when I experience unusual body sensations</i> )		.58		
8. Eu tenho medo de ficar tonto ou mesmo com o fato de desmaiar ( <i>I have faith that my future holds great promise</i> )		.52		
21. Eu fico assustado(a) quando não consigo focar em uma atividade ( <i>It scares me when I'm unable to focus on a task</i> )		.44		
11. Eu geralmente ajo sem pensar ( <i>I usually act without stopping to think</i> )			.66	
15. Em geral, eu sou uma pessoa impulsiva ( <i>Generally, I am an impulsive person</i> )			.57	
5. Muitas vezes, eu me envolvo em situações em que venho me arrepender depois ( <i>I often involve myself in situations that I later regret being involved in</i> )			.56	
22. Eu sinto que tenho que ser manipulativo(a) para conseguir o que quero ( <i>I feel I have to be manipulative to get what I want</i> )			.48	
2. Muitas vezes, eu falo sem pensar ( <i>I often don't think things through before I speak</i> )			.44	
9. Eu gosto de participar de atividades que me dão um pouco de medo ( <i>I like doing things that frighten me a little</i> )				.71
3. Eu gostaria de pular de paraquedas ( <i>I would like to skydive</i> )				.69
6. Eu gosto de novas e emocionantes aventuras mesmo que elas sejam incomuns ( <i>I enjoy new and exciting experiences even if they are unusual</i> )				.60
16. Eu tenho interesse em experienciar coisas novas pelo prazer da experiência em si, até mesmo se for uma atividade ilegal ( <i>I am interested in experience for its own sake even if it is illegal</i> )				.60
12. Eu gostaria de aprender a dirigir uma motocicleta ( <i>I would like to learn how to drive a motorcycle</i> )				.37
19. Eu gostaria de fazer uma caminhada de longa distância em um lugar inabitado ( <i>I would enjoy hiking long distance in wild and uninhabited territory</i> )				.34
Cronbach's alpha	.77	.76	.69	.70
Mean	11.99	11.43	11.41	12.88
SD	3.03	2.95	2.64	3.73
<i>r</i> with I/H	-	.15*	.19*	-.08

**Table 1** (continued)

	I/H	AS	IMP	SS
<i>r</i> with AS	-	-	.21**	-.04
<i>r</i> with coping IMP		-	-	.18**

All factor loadings with  $p < .001$ . Correlations Significance (\* $p < .05$ ; \*\* $p < .001$ ). I/H=Introversion/Hopelessness, AS=Anxiety Sensitivity, IMP=Impulsivity, and SS=Sensation Seeking. Items 1,4,7,13,20 and 23 require an inversion of respondent's score.

individuals prone to anxiety may be due to reducing/eliminating the effects of anxiety (Stewart et al. 1999; Stewart and Kushner 2002).

The hypothesis that cannabis is associated with the personality dimension sensation seeking was also supported in this study. Results indicate that for those Brazilian individuals that are constantly trying to experience novelty and new sensations, the use of cannabis might be seen as a means of accomplishing this. This is consistent with results of at least some prior studies that posited sensation seeking represents a positive reinforcement pathway for use of substances such as cannabis due to the supposed potentiality of this substance to enhance one's experience (Woicik et al. 2009; Miles et al. 2001; Zuckerman 1984). The fact that impulsivity was not associated with any substance - in particular stimulant drugs - was somewhat surprising given that IMP has been shown in numerous previous studies to demonstrate severe and unconstrained patterns of drug use/abuse including poly-substance use, drinking problems, and higher lifetime rates of cocaine dependence (De Wit 2008; Conrod et al. 2000a, b; Finn et al. 2002). One explanation for the absence of this association within our sample may be due to the fact that we did not explore any other factors that may better represent the proximal causes of impulsive individuals for using substances and selecting a particular one. Previous studies have shown that impulsivity may correlate with other factors that have a strong influence in substance misuse. Perry and Carroll (2008) for example suggested that impulsivity may be correlated with factors related to genetic or environmental conditions, such as gender and hormonal status, reactivity to nondrug rewards, and early life experiences (i.e., abuse/impoverished rearing conditions, prenatal drug exposure). Future studies should focus on understanding which are the major vulnerability factors for substance misuse in the Brazilian population that related to impulsivity and how the combination of these factors may influence substance use in this population.

This study presented some limitations that should be taken into account when interpreting our findings. First, this study was not originally designed to examine age and gender differences and was less than optimal with respect to information gathered (i.e. socio-

**Table 2** Personality risky types predicting alcohol and specific substance of use

Type of substance of use	Bivariate correlations/betas			
	I/H	AS	IMP	SS
Alcohol	.14*/.15*	.10/.14*	-.08/.07	-.003/.06
Cannabis	-.05/.03	-.08/.07	.19/.03	.23**/.22**
Sedatives	.06/.03	.21/.20*	.08/.03	.01/.02
Stimulants	.11/.11	-.04/.07	.04/.03	-.003/.005

\*  $p < .05$ , \*\*  $p < .001$

demographic information). Second, it is important to consider that Brazil is a large country with distinctive cultural regionalism according to different geographic areas. Although data gathered in the UK came from Brazilian migrants originally from the five geographic regions of Brazil, it would be valuable to replicate these findings within a larger sample in each of the five regions of the country as in Brazil data was gathered in the Southeast area only. Lastly and most importantly, the associations between the SURPS subscales and preferences for alcohol and specific substance of use must be interpreted with caution. Studies that explored the association between personality dimensions and specific substances of use have addressed a much more complex framework to understand this association (see Carter and Tiffany 1999; Hopley and Brunelle 2012; Perry and Carroll 2008; Woicik et al. 2009). As the main purpose of this study was to explore the validity and reliability of the Brazilian version of the SURPS, our analyses only represents a basic preliminary investigation of this association. Several other factors such as motives for alcohol or drug use, psychopathy symptoms and cue reactivity for example should be factored into future analyses to fully comprehend the relationship that personality dimensions have with preferential use of specific substances in the Brazilian population.

## Conclusion

This study examined the reliability and validity of the Brazilian Portuguese version of the SURPS. Results suggest that the four-factor Brazilian SURPS is a valid instrument for measuring four distinct personality dimensions in the Brazilian population. Moreover, results partially supported the hypothesis that the SURPS subscales are associated with a preferential substance of use. The present study offers therefore, a preliminary measure for future studies aiming to explore the role of personality dimensions predicting the use and misuse of alcohol and other substances in the Brazil.

**Conflict of Interest** The authors Martha Canfield, Catherine Gilvarry and Silvia Helena Koller declare that they have no conflict of interest.

**Informed Consent** All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.

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## Appendix 2

### Questionnaire Pack: English Version



Participant Number

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### Socio-demographic Questionnaire

1. How old are you? \_\_\_\_\_
2. Gender:        (1) Female        (2) Male
3. Which is the high level of education that you achieved so far?
  - (1) Primary School
  - (2) High School
  - (3) Technical Certificated
  - (4) College
  - (5) High Education
4. Currently a student studying \_\_\_\_\_
5. What work do you do at the moment? (If currently unemployed please indicate what your last job was) \_\_\_\_\_
6. What work do you do at the moment? (If currently unemployed please indicate what your last job was). \_\_\_\_\_
7. What is your father's occupation? (If currently unemployed please indicate what his last job was). \_\_\_\_\_
8. What is your mother's occupation? (If currently unemployed please indicate what her last job was). \_\_\_\_\_
9. With whom do you live?
  - (1) Parents
  - (2) Partner (boyfriend/girlfriend/husband/wife)
  - (3) Friends
  - (4) Another family member
  - (5) Alone
10. How many people including you live in your house? \_\_\_\_\_
11. How long do you live in the UK? \_\_\_\_\_

12. Do you attend any religious services? *If you do not attend any religious centre, please go to the next section – SUBSTANCE AND CHOICES SCALE*

(1) Yes (2) No

13. How often do you attend the services ?

(1) Two or more times per week (2) once a week (3) twice a month (4) once a month

### Substances and Choices Scale

(SACS, Christie et al., 2007)

The questions in part **A** and **B** are about your use of alcohol and drugs *over the past month*. Please answer every question as best you can, even if you are not certain. Tick only one box in each row.

<b>A</b>	<i>How many times did you use each of the following in the past month?</i>	<i>Never</i>	<i>Once a week or less</i>	<i>More than once a week</i>	<i>Most days or more</i>
1	Alcoholic drinks (eg. beer, wine, spirits, etc)				
2	Tobacco (eg. cigarettes, cigars, pipe)				
3	Cannabis (eg. weed, marijuana, pot, skunk, etc)				
4	Cocaine (eg. coke, crack, blow, etc)				
5	Amphetamines (eg. speed, T, tina, crystal, whiz, etc)				
6	Ecstasy and other party drugs (eg. 'E', GHB, etc)				
7	Inhalants (eg. poppers, glue, petrol, solvents, paint, etc)				
8	Sedatives (eg. sleeping pills, benzos, downers, valium)				
9	Hallucinogens (eg. LSD, acid, mushrooms, ketamine, etc)				
10	Opiates (eg. heroin, morphine, methadone, codeine, etc)				
11	BZP (eg. 'herbal highs', energy pills, etc)				
12	Other drug. Name .....				
13	Other drug. Name .....				

**Quantity: How many drinks do you consume on a night out? Number \_\_\_\_\_**



<b>B</b>	<i>Mark one box (on each row) on the basis of how things have been for you <b>in the last month</b></i>	<i><b>Not true</b></i>	<i><b>Somewhat true</b></i>	<i><b>Certainly true</b></i>
1	I took alcohol or drugs when I was alone			
2	I've thought I might be hooked or addicted to alcohol or drugs			
3	Most of my free time has been spent getting hold of, taking, or recovering from alcohol or drugs			
4	I've wanted to cut down on the amount of alcohol or drugs that I am using			
5	My alcohol or drug use has stopped me getting important things done			
6	My alcohol or drug use has led to arguments with the people I live with			
7	I've had unsafe sex when taking alcohol or drugs			
8	I've had an unwanted sexual experience when taking alcohol or drugs			
9	My performance or attendance at work (or college) has been affected by my alcohol or drug use			
10	I did things that could have got me into serious trouble (stealing, vandalism, violence etc) when using alcohol or drugs			
11	I've driven a car while under the influence of alcohol or drugs (or have been driven by someone under the influence)			

## Drinking Motives Questionnaire Revised

(DMQ-R, Cooper, 1994)

Below is a list of reasons people sometimes give for drinking alcohol. Thinking of all the times you drink, how often would you say that you drink for each of the following reasons?"

1. To forget your worries  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
2. Because your friends pressure you to drink  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
3. Because it helps you enjoy a party  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
4. Because it helps you when you feel  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
5. To be sociable  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
6. To cheer up when you are in a bad mood  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
7. Because you like the feeling  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
8. So that others won't kid you about not  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
9. Because it's exciting  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
10. To get high  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
11. Because it makes social gatherings more fun  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
12. To fit in with a group you like  
(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always
13. Because it gives you a pleasant feeling

## The 14-Item Resilience Scale (RS-14)

(RS-14, Wagnild & Young, 1993)

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right. Click the circle below the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, click the circle below "1". If you are neutral, click "4", and if you strongly agree, click "7", etc.

(1)almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

Strongly  
Disagree                      Strongly  
Agree

### 14. Because it improves parties and celebrations

(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

### 15. Because you feel more self-confident and sure of yourself

(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

### 16. To celebrate a special occasion with friends depressed or nervous

(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

### 17. To forget about your problems

(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

### 18. Because it's fun drinking

(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

### 19. To be liked

(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

### 20. So you won't feel left out

(1) almost never/never (2) some of the time (3) half of the time, (4) most of the time (5) almost always/always

1. I usually manage one way or another.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I feel proud that I have accomplished things in life.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I usually take things in stride.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I am friends with myself.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. I am determined.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I have self-discipline.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I keep interested in things.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I can usually find something to laugh about.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. My belief in myself gets me through hard times.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. In an emergency, I'm someone people can generally rely on.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. My life has meaning.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. When I'm in a difficult situation, I can usually find my way out of it.	1	2	3	4	5	6	7
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### The Substance Use Risk Profile Scale (SURPS, Conrod & Woicik, 2002)

Please report whether do you agree or disagree with the statement bellow using a 4-point Likert Scale (1 “strong disagree” to 4 “strong agree”).

1. I am content  
(1) Strong disagree   (2) Disagree   (3) Agree   (4) Strong Agree
2. I often don't think things through before I speak  
(1) Strong disagree   (2) Disagree   (3) Agree   (4) Strong Agree
3. I would like to skydive  
(1) Strong disagree   (2) Disagree   (3) Agree   (4) Strong Agree
4. I am happy  
(1) Strong disagree   (2) Disagree   (3) Agree   (4) Strong Agree
5. I often involve myself in situations that I later regret being involved in  
(1) Strong disagree   (2) Disagree   (3) Agree   (4) Strong Agree
6. I enjoy new and exciting experiences even if they are unusual  
(1) Strong disagree   (2) Disagree   (3) Agree   (4) Strong Agree



7. I have faith that my future holds great promise  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
8. It's frightening to feel dizzy or faint  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
9. I like doing things that frighten me a little  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
10. It frightens me when I feel my heart beat change  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
11. I usually act without stopping to think  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
12. I would like to learn how to drive a motorcycle  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
13. I feel proud of my accomplishments  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
14. I get scared when I'm too nervous  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
15. Generally, I am an impulsive person  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
16. I am interested in experience for its own sake even if it is illegal.  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
17. I feel that I'm a failure.  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
18. I get scared when I experience unusual body sensations.  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
19. I would enjoy hiking long distances in wild and uninhabited territory.  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
20. I feel pleasant  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
21. It scares me when I'm unable to focus on a task  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
22. I feel I have to be manipulative to get what I want.  
(1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree
23. I am very enthusiastic about my future

- (1) Strong disagree (2) Disagree (3) Agree (4) Strong Agree

### The Positive and Negative Affect Schedule

(PANAS, Watson et al., 1988)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. Indicate to what extent you feel this way over the past week

1	2	3	4	5
Very Slightly or Not at All		A Little Moderately		Quite a Bit Extremely

- |                       |                      |
|-----------------------|----------------------|
| _____ 1. Interested   | _____ 11. Irritable  |
| _____ 2. Distressed   | _____ 12. Alert      |
| _____ 3. Excited      | _____ 13. Ashamed    |
| _____ 4. Upset        | _____ 14. Inspired   |
| _____ 5. Strong       | _____ 15. Nervous    |
| _____ 6. Guilty       | _____ 16. Determined |
| _____ 7. Scared       | _____ 17. Attentive  |
| _____ 8. Hostile      | _____ 18. Jittery    |
| _____ 9. Enthusiastic | _____ 19. Active     |
| _____ 10. Proud       | _____ 20. Afraid     |

### Acculturation, Habits and Interests Multicultural Scale for Adolescents

(AHIMSA, Unger et al., 2002)

For the next 8 questions, we would like you to think about your life in Britain. Please mark which country (Brazil, Britain, both countries or neither country) better represents you in the statements

- |   |        |         |      |         |
|---|--------|---------|------|---------|
| 1. I am most comfortable being with people from                     | Brazil | Britain | Both | Neither |
| 2. My best friends are from...                                      | Brazil | Britain | Both | Neither |
| 3. The people I fit in with best are from...                        | Brazil | Britain | Both | Neither |
| 4. My favourite music is from...                                    | Brazil | Britain | Both | Neither |
| 5. My favourite TV shows are from...                                | Brazil | Britain | Both | Neither |
| 6. The holidays that I celebrate are from...                        | Brazil | Britain | Both | Neither |
| 7. The food I eat at home is from...                                | Brazil | Britain | Both | Neither |
| 8. The way I do things and the way I think about things are from... | Brazil | Britain | Both | Neither |

### Multidimensional Acculturative Stress Scale

(MASS, Jibeen and Khalid, 2010)

Please report to what extend you agree or disagree with the following statements.

- British people treat me like a foreigner  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
- I am treated differently because of my race or skin color

- (1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
3. I am constantly reminded of my minority status  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  4. I think that many opportunities are denied to me because I am Brazilian  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  5. I think that British society discriminates against me just because I am Brazilian  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  6. I feel that British people do not treat me with respect.  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  7. People from other ethnic groups try to stop me from advancing  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  8. I worry that my children/next generation will become very broad mind  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  9. I feel as if I am divided between Brazil and Britain  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  10. I worry that my children/next generation will not adopt follow Brazilian believes and customs.  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  11. I feel that I am neither Brazilian nor British  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  12. I am losing my Brazilian identity.  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  13. I feel sad when I do not see my cultural roots in this society  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  14. My job/my work is uncertain.  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  15. I have few opportunities to earn more income.  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  16. My job is below my experience and qualifications  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  17. I am disappointed that my standard of living is not what I hoped for before coming to Britain.  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree
  18. My job experience and education in Brazil have not been recognized at work.  
(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree

19. I miss my country and my people

(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree

20. I am living far away from my family member, relatives and friends

(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree

21. I miss my family members, relatives and friends

(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree

22. I think that my family responsibilities have increased after coming to Britain.

(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree

23. I have difficulty understanding English in some situations.

(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree

24. Due to language differences, it is difficult for me to express my ideas.

(1) Disagree (2) To some extent disagree (3) To some extent agree (4) Agree

## **APPENDIX 3**

### **ETHICAL APPROVAL: UNIVERSITY OF ROEHAMPTON**

**From:** Jan Harrison  
**Sent:** 18 December 2012 10:06  
**To:** Martha Jirkowsky Canfield (Research Student)  
**Cc:** Lance Slade; Diane Bray; Catherine Gilvarry  
**Subject:** Ethics Application Ref: PSYC 12/ 060

Dear Martha,

**Ethics Application**

**Applicant: Martha Canfield**

**Title: The impact of acculturation on the predictors of alcohol  
and substance misuse amongst Brazilian immigrants in the UK**

**Reference: PSYC 12/ 060**

**Department: Psychology**

Many thanks for your response and the amended documents. I am pleased to confirm that the conditions for approval of this project have now been met. We do not require anything further in relation to this application.

Please advise us if there are any changes to the research during the life of the project. Minor changes can be advised using the Minor Amendments Form on the Ethics Website, but substantial changes may require a new application to be submitted.

Many thanks,

Jan

**Jan Harrison**

Ethics Administrator - Research & Business Development Office  
University of Roehampton | Froebel College | Roehampton Lane | London | SW15 5PJ

[jan.harrison@roehampton.ac.uk](mailto:jan.harrison@roehampton.ac.uk) | [www.roehampton.ac.uk](http://www.roehampton.ac.uk)

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Consider the environment. Please don't print this e-mail unless you really need to.

## APPENDIX 4

### ETHICAL APPROVAL: UFRGS, Brazil



MINISTÉRIO DA SAÚDE - Conselho Nacional de Saúde - Comissão Nacional de Ética em Pesquisa - CONEP

#### FOLHA DE ROSTO PARA PESQUISA ENVOLVENDO SERES HUMANOS

1. Projeto de Pesquisa: Fatores preditores de uso de álcool e outras drogas em brasileiros residentes no Brasil e em brasileiros residentes no Reino Unido		2. Número de Sujeitos de Pesquisa: 400	
3. Área Temática: Área 8. Pesquisa com cooperação estrangeira.			
4. Área do Conhecimento: Grande Área 4. Ciências da Saúde			
<b>PESQUISADOR RESPONSÁVEL</b>			
5. Nome: Martha Canfield			
6. CPF: 007.439.520-30	7. Endereço (Rua, n.º): Lower Floor 246 Leahurst Road Lewisham 135		
8. Nacionalidade: BRASILEIRA	9. Telefone: 00 (44) 7516-0621	10. Outro Telefone:	11. Email: marthacanfield@hotmail.com
12. Cargo: <u>Estudante de Doutorado (PhD) student</u>			
<p>Termo de Compromisso: Declaro que conheço e cumprirei os requisitos da Resolução CNS 196/96 e suas complementares. Comprometo-me a utilizar os materiais e dados coletados exclusivamente para os fins previstos no protocolo e a publicar os resultados sejam eles favoráveis ou não. Aceito as responsabilidades pela condução científica do projeto acima. Tenho ciência que essa folha será anexada ao projeto devidamente assinada por todos os responsáveis e fará parte integrante da documentação do mesmo.</p>			
Data: <u>08 / 05 / 2013</u>		 Assinatura	
<b>INSTITUIÇÃO PROPONENTE</b>			
13. Nome: Universidade Federal do Rio Grande do Sul	14. CNPJ:	15. Unidade/Órgão: Instituto de Psicologia - UFRGS	
16. Telefone: (51) 3308-5698	17. Outro Telefone:		
<p>Termo de Compromisso (do responsável pela instituição): Declaro que conheço e cumprirei os requisitos da Resolução CNS 196/96 e suas Complementares e como esta instituição tem condições para o desenvolvimento deste projeto, autorizo sua execução.</p>			
Responsável: <u>Silvia Helena Koller</u> CPF: <u>368.900650-39</u>			
Cargo/Função: <u>Professora</u>			
Data: <u>08 / 05 / 2013</u>		 Assinatura	
<b>PATROCINADOR PRINCIPAL</b>			
Não se aplica.			

## APPENDIX 5

### PARTICIPANT CONSENT FORM: QUANTITATIVE STUDY



ETHICS COMMITTEE

#### PARTICIPANT CONSENT FORM

**Title of Research Project:** The predictors of alcohol and substance misuse amongst Brazilians immigrants in the UK.

**Brief Description of Research Project:** This study aims to establish which factors are associated with alcohol and drug use amongst young Brazilian adults, and to explore how, and the extent to which, the process of adaptation to British society plays a role in substance misuse among Brazilian immigrants in the UK. The data will be used for a Doctoral Thesis about alcohol and substance misuse. Participants must be between 18 and 30 years old and have moved directly from Brazil to the UK. An estimated number of 400 Brazilian participants (residents of Porto Alegre and London) will participate in this research by completing a questionnaire pack containing 8 questionnaires which will gather data on: socio-demographic details, alcohol and drugs use, motives for drinking, the ability to cope with stress and adversity, personality traits, positive and negative affect, and two questionnaires about how your life is in Britain. These questionnaires will take approximately 25 minutes to be completed. A small number of participants will be invited to take part in a face-to-face interview, and it is possible that you may be invited to do so.

We can assure you that all the information you give will be held and processed in the strictest confidence, in accordance with the Data Protection Act (1998). All data will be held securely in password protected computer files and locked filing cabinets. **No one outside of the research team will have access to your individual data, and anonymity will be protected at all times. Your questionnaire responses will be identified by a unique number only, and your name will not be used to identify your data. Signed consent forms will be kept separately from all other data. Your identity will not be passed on to anyone who is not involved in this study, and will be protected in the publication of any findings. If you may wish to withdraw your data you will be able to do this by providing the researcher with your unique number.**

**Investigator Contact Details:**

Martha Canfield  
Departamento de Psicologia  
Whitelands College  
Universidade of Roehampton  
Holybourne Avenue  
London SW15 4JD  
[canfielm@roehampton.ac.uk](mailto:canfielm@roehampton.ac.uk)

**Consent Statement:**

I agree to take part in this research, and am aware that I am free to withdraw at any point. I understand that the information I provide will be treated in confidence by the investigator although I understand that if a risk of serious harm arises that the researcher may need to take appropriate action. I understand that my identity will be protected in the publication of any findings.

Name .....

Signature .....

Date .....

**Please note:** if you have a concern about any aspect of your participation or any other queries please raise this with the investigator or with the co-supervisor of this project in Brazil or the Director of Studies. However, if you would like to contact an independent party please contact the Head of Department of Psychology Department of University Roehampton.

**Director of Studies:**

Dr. Catherine Gilvarry  
Departamento de Psicologia  
University of Roehampton  
Whitelands College  
Holybourne Avenue  
London SW15 4JD  
[c.gilvarry@roehampton.ac.uk](mailto:c.gilvarry@roehampton.ac.uk)  
Tel: 00 (44) 20 8392 3449

**Head of Department:**

Dr. Diane Bray  
Departamento de Psicologia  
University of Roehampton  
Whitelands College  
Holybourne Avenue  
London SW15 4DJ  
[d.bray@roehampton.ac.uk](mailto:d.bray@roehampton.ac.uk) .  
Tel: 00 (44) 20 8392 3627





**ETHICS COMMITTEE  
PARTICIPANT CONSENT STATEMENT – INTERVIEW**

A small number of participants will be invited to take part in a face-to-face interview based on the similarity of some questionnaire's scores. It is possible that you may be invited to do so.

By signing this consent, you agree to the investigator to contact you if you should be select for the interview.

**Name:**.....

**Participant Number:** .....

**Email:** .....

**Signature:**.....

**Date:** .....

## APPENDIX 6

### PARTICIPANT CONSENT FORM: QUANTITATIVE STUDY



#### ETHICS COMMITTEE PARTICIPANT CONSENT FORM

**Title of Research Project:** The predictors of alcohol and substance misuse amongst Brazilians in Brazil.

**Brief Description of Research Project:** This study aims to establish which factors are associated with alcohol and drug use amongst young Brazilian adults, and to explore how, and the extent to which, the process of adaptation to British society plays a role in substance misuse among Brazilian immigrants in the UK. The data will be used for a Doctoral Thesis about alcohol and substance misuse. Participants must be between 18 and 30 years old. You were invited to take part in this interview based on the questionnaire that you previously complete. Some of your responses were similar to other participants collaborating to the uniformity of the sample. An estimated number of 25 participants (residents of Porto Alegre and London) will be interviewed. Each interview will take approximately 45 to 60 minutes, and will focus largely on your life in Britain, about the process of adaptation to the new culture, drinking habits and/or drugs intake and some aspects of your previous life in Brazil. This is a semi-structure interview where the researcher will ask some questions according to your responses. The interview will be tape-recorded.

We can assure you that all the information you give will be held and processed in the strictest confidence, in accordance with the Data Protection Act (1998). All data will be held securely in password protected computer files and locked filing cabinets. **No one outside of the research team will have access to your individual data, and anonymity will be protected at all times. Your identity will not be passed on to anyone who is not involved in this study, and will be protected in the publication of any findings. Neither, the written up thesis nor any published work resulting from it will identify you and pseudonyms will be used instead of your name. If at any point you wish to withdraw your data you will be able to do this by contacting the researcher with your participant number, however, your data may still be used in a collated form.**

**Investigator Contact Details:**

Martha Canfield  
Departamento de Psicologia  
Whitelands College  
Universidade of Roehampton  
Holybourne Avenue  
London SW15 4JD  
[canfielm@roehampton.ac.uk](mailto:canfielm@roehampton.ac.uk)

**Consent Statement:**

I agree to take part in this research, and am aware that I am free to withdraw at any point. I understand that the information I provide will be treated in confidence by the investigator although I understand that if a risk of serious harm arises that the researcher may need to take appropriate action. I understand that my identity will be protected in the publication of any findings.

Name .....

Signature .....

Date .....

**Please note:** if you have a concern about any aspect of your participation or any other queries please raise this with the investigator or with the co-supervisor of this project in Brazil or the Director of Studies. However, if you would like to contact an independent party please contact the Head of Department of Psychology Department of University Roehampton.

**Director of Studies:**

Dr. Catherine Gilvarry  
 Departamento de Psicologia  
 University of Roehampton  
 Whitelands College  
 Holybourne Avenue  
 London SW15 4JD  
[c.gilvarry@roehampton.ac.uk](mailto:c.gilvarry@roehampton.ac.uk)  
 Tel: 00 (44) 20 8392 3449

**Head of Department:**

Dr. Diane Bray  
 Departamento de Psicologia  
 University of Roehampton  
 Whitelands College  
 Holybourne Avenue  
 London SW15 4DJ  
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 Tel: 00 (44) 20 8392 3627

## APPENDIX 7

### TRANSLATION OF THE ADAPTED QUESTIONNAIRES

Original	Translanton 1	Translanton 2	Synthesized translation	Back-trans 1	Back-trans 2	Synthesize d back- translation
<b>Substances and Choices Scales</b>	<b>Escala de Substance e Escolha</b>					
Mark one box (on each row) on the basis of how things have you been for you <b><u>in the last month</u></b>	Indique por favor com que extencao voce concorda ou discorda com as seguintes afirmacoes	Indique a opcao que que sinaliza como as coisas tem sido para voce no ultimo mes	Indique por favor com que extencao voce concorda ou discorda com as seguintes afirmacoes			
I took alcohol or drugs when I was alone	Eu bebi alcool ou usei droga quando estava sozinho (a)	Eu usei alcool ou drogas quando estava sozinho (a)	Eu bebi alcool ou usei droga quando estava sozinho (a)			
I've thought I might be hooked or addicted to alcohol or drugs	Eu pensei que eu poderia estar viciado em alcool ou drogas	Eu pensei que eu poderia estar viciado em alcool ou drogas	Eu pensei que eu poderia estar viciado em alcool ou drogas			
Most of my free time has been spent getting hold of, taking, or recovering from alcohol or drugs	Eu passei a maioria do meu tempo livre obtendo, usando ou recuperando do uso de alcool ou drogas	A maioria do meu tempo livre foi gasto tentando conseguir, usando ou me recuperando do uso de alcool ou drogas	Eu passei a maioria do meu tempo livre obtendo, usando ou recuperando do uso de alcool ou drogas			
I've wanted to cut down on the amount of alcohol or drugs that I am using	Eu estive querendo cortar a quantia de alcool e drogas que eu estava usando	Eu estive querendo reduzir a quantidade de alcool ou drogas que estou usando	Eu estive querendo reduzir a quantidade de alcool ou drogas que estou usando			
My alcohol or drug use has stopped me getting important things done	Meu uso de alcool e droga dificultou a realizacao de tarefas importantes	Meu uso de alcool ou drogas tem me impedido de realizar tarefas importantes	Meu uso de alcool e droga dificultou a realizacao de tarefas importantes			
My alcohol or drug use has led to arguments with people I live with	Meu uso de alcool e droga desencadearam discussoes com pessoas com quem eu moro	Meu uso de alcool ou droga levou a discussoes com pessoas que eu moro	Meu uso de alcool e droga desencadearam discussoes com pessoas com quem eu moro			

I've had an unwanted sexual experience when taking alcohol or drugs	Eu estive fazendo sexo arriscado/ sem protecao quando estava sobre a influencia de alcool ou drogas	Eu tive experiencias sexuais que eu nao queria quando sob o uso de alcool ou drogas	Eu tive experiencias sexuais que eu nao queria quando sob o uso de alcool ou drogas
My performance or attendance at work (or college) has been affected by my alcohol or drug use	Meu desempenho e presenca no trabalho (ou escolar/universidade) tem sido afetado pelo meu uso de alcool ou droga	Meu desempenho ou presenca no trabalho (ou faculdade/escola) tem sido afetado pelo meu uso de alcool ou droga	Meu desempenho ou presenca no trabalho (ou faculdade/escola) tem sido afetado pelo meu uso de
I did things that could have got me into serious trouble (stealing, vandalism, violence etc) when using alcohol or drugs	Fiz parte de atividades que poderiam ter me causado serios problemas (ex. Roubo, vandalismo, violencia, etc) quando usei alcool ou drogas	Eu fiz coisas que poderiam ter me causado serios problemas (roubo, vandalismo, violencia, etc) quando sob o uso de alcool ou drogas	Eu fiz coisas que poderiam ter me causado serios problemas (roubo, vandalismo, violencia, etc) quando sob o uso de alcool ou drogas
I've driven a car while under the influence of alcohol or drugs (or have been driven by someone under the influence)	Eu estive dirigindo um carro enquanto estava influenciado pelo alcool ou drogas (ou peguei carona de alguem que estava sobre influencia)	Eu ja dirigi um carro quando sob influencia de alcool ou drogas (ou ja estive no carro com o motorista sob influencia)	Eu ja dirigi um carro quando sob influencia de alcool ou drogas (ou ja estive no carro com o motorista sob influencia)
1 – Not true	1 – Nao e verdade	Nao eh verdade	Nao eh verdade
2 – Somewhat true	2 – De alguma maneira e verdade	De alguma maneira eh verdade	De alguma maneira eh verdade
3 – Certainly true	3 – Com certeza e verdade	Com certeza eh verdade	Com certeza eh verdade

THE POSITIVE AND NEGATIVE AFFECT SCHEDULE	ESCALA SOBRE AFETO POSITIVO E NEGATIVO		
This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word.	Esta escala consiste de um numero de 20 palavras que descrevem diferentes sentimentos e emocoes. Leia cada palavra, e, entao indique em que medida voce sentiu tais emocoes no ultimo mes. Escreva o numero que melhor representaa	Essa escala consiste de um numero de 20 palavras que descrevem diferentes sentimentos e emocoes. Leia cada item e depois indique o numero da escala abaixo, ao lado de cada palavra, que	Essa escala consiste de um numero de 20 palavras que descrevem diferentes sentimentos e emocoes. Leia cada item e depois indique o numero da escala abaixo, ao lado de cada palavra, que

## Appendix 7

Indicate to what extent you feel this way <b><u>over the past week</u></b>	seus sentimentos usando a escala abaixo	representa com que extencao que voce se sentiu dessa maneira ao longo da ultima semana	representa com que extencao que voce se sentiu dessa maneira ao longo da ultima semana
Interested	Interessado (a)	Interessado (a)	Interessado (a)
Distressed	Angustiado (a)	Angustiado (a)	Angustiado (a)
Excited	Animado (a)	Animado (a)	Animado (a)
Upset	Triste	Chateado (a)	Chateado (a)
Strong	Forte	Forte	Forte
Guilty	Envergonhado (a)	Culpado (a)	Culpado (a)
Scared	Assustado (a)	Assustado (a)	Assustado (a)
Hostile	Hostil	Hostil	Hostil
Enthusiastic	Entusiasmado (a)	Entusiasmado (a)	Entusiasmado (a)
Proud	Orgulhoso (a)	Orgulhoso (a)	Orgulhoso (a)
Irritable	Irritado (a)	Irritavel	Irritavel
Alert	Alerto (a)	Alerto (a)	Alerto (a)
Ashamed	Envergonhado (a)	Envergonhado (a)	Envergonhado (a)
Inspired	Inspirado (a)	Inpirado (a)	Inpirado (a)
Nervous	Nervoso (a)	Nervoso (a)	Nervoso (a)
Determined	Determinado (a)	Determinado (a)	Determinado (a)
Attentive	Atento (a)	Atento	Atento
Jittery	Mal- estar	Agitado	Agitado
Active	Ativo (a)	Ativo (a)	Ativo (a)
Afraid	Amedrontado (a)	Amedrontado (a)	Amedrontado (a)
1 – Very slightly or Not at all	1 – Muito pouco ou nada	Muito pouco ou nada	Muito pouco ou nada
2 – A little	2 – Um pouco	Um pouco	Um pouco
3 – Moderately	3 – Moderadamente	Moderadamente	Moderadamente
4 – Quite a bit	4. As vezes	As vezes	As vezes
5 - Extremely	5- Muitas vezes	Extremamente	Muitas vezes

<b>ACCULTURATIVE, HABITS AND INTERESTS MULTICULTURAL SCALE</b>		<b>ESCALA SOBRE ACULTURACAO, HABITOS E INTERESSES MULTICULTURAIS</b>	
For the next 8 questions, we would like you to think about your life in Britain. Please mark which country (Brazil, Britain, both countries or neither country) better represents you in the statement	Nas próximas 8 questões, pense na sua vida aqui no Reino Unido. Marque que país (Reino Unido, Brasil, ambos países ou nenhum dos dois países) você se identifica em cada pergunta.	Nas próximas 8 questões, nós gostaríamos que você pensasse sobre sua vida na Grã-Bretanha. Por favor marque qual país (Brasil, Grã-Bretanha, ambos os países ou nenhum país) melhor representa você na afirmação.	Nas próximas 8 questões, pense na sua vida aqui no Reino Unido. Marque que país (Reino Unido, Brasil, ambos países ou nenhum dos dois países) você se identifica em cada pergunta.
I am most comfortable being with people from... Brazil/Britain/Both/Neither	Eu sinto estar mais confortável quando estou com pessoas do...	Eu me sinto mais confortável estando com pessoas do... Brasil/Grã-Bretanha/Ambos/Nenhum	Eu me sinto mais confortável estando com pessoas do...
My best friends are from... Brazil/Britain/Both/Neither	Meus melhores amigos são do...	Meus melhores amigos são do... Brasil/Grã-Bretanha/Ambos/Nenhum	Meus melhores amigos são do...
The people I fit in with best are from... Brazil/Britain/Both/Neither	As pessoas com quem eu me dou melhor são do...	Meus melhores amigos são do... Brasil/Grã-Bretanha/Ambos/Nenhum	Meus melhores amigos são do...
My favourite music are from... Brazil/Britain/Both/Neither	Minhas músicas prediletas são do...	Minha música favorita é do... Brasil/Grã-Bretanha/Ambos/Nenhum	Minhas músicas prediletas são do...
My favourite TV shows are from... Brazil/Britain/Both/Neither	Meus programas de TV prediletos são do...	Meus programas de TV favoritos são do... Brasil/Grã-Bretanha/Ambos/Nenhum	Meus programas de TV prediletos são do...
The holidays that I celebrate are from... Brazil/Britain/Both/Neither	Meus programas de TV prediletos são do...	Os feriados que eu celebro são do... Brasil/Grã-Bretanha/Ambos/Nenhum	Meus programas de TV prediletos são do...
The food I eat at home is from... Brazil/Britain/Both/Neither	A comida que eu geralmente como eu casa é do...	A comida que eu como em casa é do... Brasil/Grã-Bretanha/Ambos/Nenhum	Meus programas de TV prediletos são do...

The way I do things and the way I think about things are from... Brazil/Britain/Both/Neither	A maneira como eu faço as coisas e a maneira como eu penso são do...	A maneira como eu faço as coisas e como eu penso são do... Brasil/Grã-Bretanha/Ambos/Nenhum	A maneira como eu faço as coisas e a maneira como eu penso são do...
<b>MULTIDIMENSIONAL ACCULTURATIVE STRESS SCALE</b>	<b>MULTIDIMENSIONAL ESCALA SOBRE ESTRESS ACULTURATIVO</b>	<b>ESCALA MULTIDIMENSIONAL SOBRE ESTRESSE ACULTURATIVO</b>	
Please report to what extent you agree or disagree with the following statements	Indique por favor com que extensão você concorda ou discorda com as seguintes afirmações	Por favor indique com que extensão você concorda ou discorda com as seguintes afirmações.	Indique por favor com que extensão você concorda ou discorda com as seguintes afirmações
British people treat me like a foreigner	Britânicos tratam-me como estrangeiro	Britânicos me tratam como um estrangeiro	Britânicos tratam-me como estrangeiro
I am treated differently because of my race or skin color	Eu sou tratado(a) diferente por causa da minha raça, etnia ou cor	Eu sou tratado(a) de forma diferente por causa da minha etnia ou cor de pele.	Eu sou tratado(a) de forma diferente por causa da minha etnia, raça ou cor de pele.
I'm constantly reminded of my minority status	Eu sou constantemente lembrado(a) do meu status como membro(a) de um grupo étnico minoritário.	Sou constantemente lembrado(a) da minha posição minoritária.	Eu sou constantemente lembrado(a) do meu status como membro(a) de um grupo étnico minoritário.
I think that many opportunities are denied to me because I am Brazilian	Eu acho que várias oportunidades são negadas porque eu sou Brasileiro(a)	Eu acredito que várias oportunidades são negadas a mim por eu ser brasileiro.	Eu acho que várias oportunidades são negadas porque eu sou brasileiro(a)
I think that British society discriminates against me just because I am Brazilian	Eu sinto que a comunidade britânica me discrimina porque eu sou Brasileiro(a).	Eu acredito que a sociedade britânica me discrimina por eu ser brasileiro.	Eu sinto que a comunidade britânica me discrimina porque eu sou brasileiro(a).
I feel that British people do not treat me with respect	Eu sinto que os Britânicos não me tratam com respeito.	Eu sinto que os britânicos não me tratam com respeito.	Eu sinto que os britânicos não me tratam com respeito.



People from other ethnic groups try to stop me from advancing	Pessoas de outros grupos étnicos tentam impedir de eu progredir	Pessoas de outros grupos étnicos me impedem de progredir.	Pessoas de outros grupos étnicos tentam impedir de eu progredir
I worry that my children/ next generation will become very broad mind	Me preocupa o fato de que um dia meus filhos poderão ter uma “mente muito aberta”	Eu me preocupo que meus filhos/ a próxima geração tenham mais mente aberta.	Eu me preocupo que meus filhos/ a próxima geração tenham “mente muito aberta”.
I feel as if I am divided between Brazil and Britain	Eu sinto como se estivesse dividido(a) entre Brasil e Reino Unido.	Eu me sinto como se estivesse dividido entre Brasil e Grã Bretanha	Eu sinto como se estivesse dividido(a) entre Brasil e Reino Unido.
I worry that my children/ next generation will not adopt follow Brazilian believes and customs.	Eu me preocupo que um dia meus filhos não irão adotar os costumes brasileiros.	Eu me preocupo que meus filhos/ próxima geração não adotem ou não sigam as crenças e costumes Brasileiros.	Eu me preocupo que um dia meus filhos não irão adotar os costumes brasileiros.
I feel that I am neither Brazilian nor British	Eu sinto que não sou nem Brasileiro(a), nem Britânico(a)	Eu sinto que não sou nem brasileiro(a), nem britânico(a)	Eu sinto que não sou nem brasileiro(a), nem britânico(a)
I am losing my Brazilian identity	Eu estou perdendo minha identidade Brasileira.	Eu estou perdendo a minha identidade brasileira.	Eu estou perdendo a minha identidade brasileira.
I feel sad when I do not see my cultural roots in this society.	Eu fico triste quando não vejo minhas raízes culturais neste país.	Eu me sinto triste quando não vejo as minhas raízes culturais nessa sociedade.	Eu fico triste quando não vejo minhas raízes culturais neste país.
My job/ my work is uncertain	Meu trabalho é incerto.	Meu emprego/ meu trabalho é incerto.	Meu trabalho é incerto.
I have few opportunities to earn more income	Eu tenho poucas oportunidades para aumentar meu salário.	Tenho poucas oportunidades de ganhar mais dinheiro.	Eu tenho poucas oportunidades para aumentar meu salário.
My job is below my experience and qualifications	Meu trabalho é abaixo das minhas experiências e qualificações.	Meu trabalho é inferior à minha experiência e qualificação	Meu trabalho é inferior à minha experiência e qualificação
I am disappointed that my standard of living is not what I hoped for before coming to Britain	Eu estou desapontado(a) com minhas condições de moradia pois não era o que eu esperava antes de vir ao Reino Unido.	Eu estou desapontado que meu padrão de vida não é o que eu esperava antes de vir para a Grã Bretanha.	Eu estou desapontado que meu padrão de vida não é o que eu esperava antes de vir para a Grã Bretanha.

My job experience and education in Brazil have not been recognized at work.	Minha experiência de trabalho e nível de escolaridade não são reconhecidos no meu emprego.	Minha experiência profissional e educação brasileira não estão sendo reconhecidos no meu trabalho.	Minha experiência de trabalho e nível de escolaridade não são reconhecidos no meu emprego.
I miss my country and my people	Eu sinto saudades do meu país e das “minhas pessoas”	Eu sinto falta do meu país e do meu povo.	Eu sinto saudades do meu país e do meu povo.
I am living far away from my family member, relatives and friends.	Eu vivo longe da minha família, conhecidos e amigos.	Eu estou vivendo longe dos meus familiares, dos meus parentes e amigos.	Eu vivo longe da minha família, conhecidos e amigos.
I miss my family members, relatives and friends.	Eu sinto saudades da minha família, conhecidos e amigos.	Eu sinto falta dos meus familiares, parentes e amigos.	Eu sinto saudades da minha família, conhecidos e amigos.
I think that my family responsibilities have increased after coming to Britain	Eu acho que minhas responsabilidades familiares aumentaram depois que eu vim para o Reino Unido.	Eu acredito que minhas responsabilidades familiares aumentaram depois de vir para Grã Bretanha.	Eu acho que minhas responsabilidades familiares aumentaram depois que eu vim para o Reino Unido.
I have difficulty understanding English in some situations	Em algumas situações eu tenho dificuldades em entender inglês.	Eu tenho dificuldade em compreender o Inglês em algumas situações.	Em algumas situações eu tenho dificuldades em entender inglês.
Due to language differences, it is difficult for me to express my ideas.	Devido as diferenças entre línguas, eu sinto dificuldade em expressar minhas ideias.	Em se tratando de diferenças entre línguas, é difícil pra mim expressar minhas idéias.	Devido as diferenças entre línguas, eu sinto dificuldade em expressar minhas ideias.
1 – Disagree	1 - Discordo		
2 – To some extent disagree	2 – Discordo ate certo ponto		
3 – To some extent agree	3 – Concordo ate certo ponto		
4 – Agree	4 - Concordo		
<b>SUBSTANCE USE RISK PROFILE SCALE</b>	<b>ESCALA DE RISCO PARA USO DE SUBSTANCIAS</b>	<b>ESCALA DE RISCO PARA USO DE SUBSTANCIAS</b>	

Please report whether you agree or disagree with the statements below using a 4-point Likert Scale)	Indique por favor se voce concorda ou discorda com as seguintes afirmacoes usando uma escala de 4 pontos.	Por favor indique se voce concorda ou discorda com as seguintes afirmacoes, usando uma escala de 4 pontos	Por favor indique se voce concorda ou discorda com as seguintes afirmacoes, usando uma escala de 4 pontos
I am content	Eu sou uma pessoa satisfeita	Eu estou satisfeito	Eu sou uma pessoa satisfeita
I often don't think things through before I speak	Muitas vezes eu falo sem pensar	Eu frequentemente nao penso antes de falar	Muitas vezes eu falo sem pensar
I would like to skydive	Eu gostaria de pular de paraquedas	Eu gostaria de pular de paraquedas	Eu gostaria de pular de paraquedas
I am happy	Eu sou feliz	Eu sou feliz	Eu sou feliz
I often involve myself in situations that I later regret being involved in	Muitas vezes eu me envolvo em situacoes em que venho me arrepender depois	Eu frequentemente me coloco em situacoes que depois me arrependo	Eu frequentemente me coloco em situacoes que depois me arrependo
I enjoy new and exciting experiences even if they are unusual	Eu gosto de experimentar atividades novas e empolgantes mesmo que estas sejam atividades incomuns	Eu gosto de novas e emocionantes aventuras mesmo que elas nao sejam comuns	Eu gosto de novas e emocionantes aventuras mesmo que elas sejam incomuns
I have faith that my future holds great promise	Eu tenho fe que meu futuro sera promissor	Eu tenho fe que meu futuro eh promissor	Eu tenho fe que meu futuro sera promissor
It's frightening to feel dizzy or faint	Tenho medo de ficar tonto ou mesmo com o fato de desmaiar	Me amedronta sentir tonteira ou que vou desmaiar	Tenho medo de ficar tonto ou mesmo com o fato de desmaiar
I like doing things that frighten me a little	Eu gosto de participar de atividades que me dao um pouco de medo	Eu gosto de fazer coisas que dao um pouco de medo	Eu gosto de participar de atividades que me dao um pouco de medo
It frightens me when I feel my heart beat change	Fico assustado quando meu coracao bate diferente	Me amedronta quando eu sinto meu batimento cardiaco muda	Fico assustado quando meu coracao bate diferente
I usually act without stopping to think	Eu geralmente ajo sem pensar	Eu geralmente ajo sem pensar	Eu geralmente ajo sem pensar
I would like to learn how to drive a motorcycle	Eu gostaria de aprender a dirigir uma motorbike	Eu gostaria de aprender como andar de moto	Eu gostaria de aprender a dirigir uma motorbike
I feel proud of my accomplishments	Eu sinto orgulho das minhas realizacoes	Eu sinto orgulho das minhas conquistas	Eu sinto orgulho das minhas conquistas

## Appendix 7

I get scared when I'm too nervous	Eu fico assustado(a) quando fico muito nervosa	Eu fico assustado quando estou muito nervosa	Eu fico assustado(a) quando fico muito nervoso(a)
Generally, I am an impulsive person	Em geral, eu sou uma pessoa impulsiva	Geralmente eu sou uma pessoa impulsiva	Em geral, eu sou uma pessoa impulsiva
I am interested in experience for its own sake even if it is illegal	Eu tenho interesse em experienciar coisas novas pelo prazer da experiencia em si, ate mesmo se for uma atividade ilegal	Eu estou interessada na experiencia, por ela mesma, mesmo se for ilegal	Eu tenho interesse em experienciar coisas novas pelo prazer da experiencia em si, ate mesmo se for uma atividade ilegal
I feel that I'm a failure	Eu me sinto como um fracassado	Eu sinto que sou um fracasso	Eu sinto que sou um fracasso
I get scared when I experience unusual body sensations	Eu fico assustado(a) quando experiencio sensacoes corporais diferentes	Eu fico assustado quando sinto sensacoes corporais incomuns	Eu fico assustado(a) quando experiencio sensacoes corporais diferentes
I would enjoy hiking long distance in wild and uninhabited territory	Eu adoraria fazer uma caminhada de longa distancia em um lugar selvagem e inabitado	Eu gostaria de fazer uma caminhada de longa distancia em um lugar selvagem e inabitado	Eu gostaria de fazer uma caminhada de longa distancia em um lugar selvagem e inabitado
I feel pleasant	Eu sou uma pessoa agradavel	Eu me sinto uma pessoa agradavel	Eu sou agradavel
It scares me when I'm unable to focus on a task	Fico assustado(a) quando nao consigo focar em uma atividade	Me assusta quando nao consigo me concentrar em uma tarefa	Fico assustado(a) quando nao consigo focar em uma atividade
I feel I have to be manipulative to get what I want	Eu sinto que tenho que ser manipulativo(a) para conseguir o que quero	Eu sinto que preciso ser manipulador para conseguir o que eu quero	Eu sinto que tenho que ser manipulativo(a) para conseguir o que quero
I am very enthusiastic about my future	Sou bastante entusiasmado(a) com o meu futuro	Eu sinto muito entusiasmo pelo meu futuro	Sou bastante entusiasmado(a) com o meu futuro
1 – Strong disagree	1 - Discordo Totalmente	1 – Discordo Totalmente	
2 – Disagree	2 - Discordo	2 – Discordo	
3 – Agree	3 - Concordo	3 – Concordo	
4 – Strong Agree	4 - Concordo Totalmente	4 – Concordo Totalmente	

## APPENDIX 8

### BACK-TRANSLATION OF THE ADAPTED QUESTIONNAIRES

Original	Trans 1	Transl 2	Synthesized translation	Back-trans 1	Back-trans 2	Synthesized back- translation
<b>ESCALA DE SUBSTANCE E ESCOLHA</b>						
			Indique por favor com que extencao voce concorda ou discorda com as seguintes afirmacoes baseado como voce se sentiu no ultimo mes	Please indicate in which extent you agree or disagree with the following statements based in how you felt in the last month.	Please indicate in which extent you agree or disagree with the following statements based in how you felt in the last month	Please indicate in which extent you agree or disagree with the following statements based in how you felt in the last month
			Eu bebi alcool ou usei droga quando estava sozinho (a)	I drunk alcohol or used drugs when I was alone.	I drank alcohol or used drugs when I was alone	I drank alcohol or used drugs when I was alone
			Eu pensei que eu poderia estar viciado em alcool ou drogas	I thought that I could be addicted to alcohol or drugs.	I thought that I could be addicted to alcohol or drugs	I thought that I could be addicted to alcohol or drugs
			Eu passei a maioria do meu tempo livre obtendo, usando ou recuperando do uso de alcool ou drogas	I spent a lot of my time getting, using or recovering from alcohol or drugs use.	I spent a lot of my free time getting, using or recovering from alcohol or drugs use	I spent a lot of my free time getting, using or recovering from alcohol or drugs use
			Eu estive querendo reduzir a quantidade de alcool ou drogas que estou usando	I have being wanting to reduce the amount of alcohol and drugs that I being using.	I have being wanting to reduce the amount of alcohol and drugs that I being using	I've been wanting to reduce the amount of alcohol and drugs that I've been using
			Meu uso de alcool e droga dificultou a realizacao de tarefas importantes	My use of alcohol and drugs made more difficult the realization of important activities.	My use of alcohol and drugs made more difficult the achievement of important activities	My use of alcohol and drugs made more difficult to achieve important activities

## Appendix 8

Meu uso de alcool e droga desencadearam discussoes com pessoas com quem eu moro	My use of alcohol and drugs provoked discussions between the people that I live with.	My use of alcohol and drugs triggered discussions with people that I live with	My use of alcohol and drugs triggered discussions with people that I live with
Eu tive experiencias sexuais que eu nao queria quando sob o uso de alcool ou drogas	I had sexual experiences that I did not want when I was under the influence of alcohol or drugs.	I had nonconsensual sexual experiences when I was under the influence of alcohol or drugs	I had sexual experiences that I did not want when I was under the influence of alcohol or drugs.
Meu desempenho ou presenca no trabalho (ou faculdade/ escola) tem sido afetado pelo meu uso de alcool ou drogas	My performance and attendance at work (university/school) has been affected by the use of alcohol or drugs.	My performance and attendance at work (university/school) has been affected by the use of alcohol or drugs	My performance and attendance at work (university/school) has been affected by my use of alcohol or drugs
Eu fiz coisas que poderiam ter me causado serios problemas (roubo, vandalismo, violencia, etc) quando sob o uso de alcool ou drogas	I did things that could have caused serious problems (theft, vandalism, violence, etc.) when I was under influence of alcohol or drugs.	I did thing that could have caused me serious problems (theft, vandalism, violence, etc.) when I was under the influence of alcohol or drugs	I did thing that could have caused me serious problems (theft, vandalism, violence, etc.) when I was under the influence of alcohol or drugs
Eu ja dirigi um carro quando sob influencia de alcool ou drogas (ou ja estive no carro com o motorista sob influencia)	I already drove a car under the influence of alcohol or drugs (or I have been in a car with a driver under the influence)	I already drove a car under the influence of alcohol or drugs (or I have been in a car with a driver under the influence)	I already drove a car under the influence of alcohol or drugs (or I have been in a car with a driver under the influence)
Nao eh verdade	It is not true	It is not true	
De alguma maneira eh verdade	Somehow it is true	Somehow it is true	
Com certeza eh verdade	It is certainly true	It is certainly true	
Back-trans		Back-trans	

<b>ESCALA SOBRE AFETO POSITIVO E NEGATIVO</b>	<b>1</b>	<b>2</b>	<b>Synthesized back-translation</b>
Essa escala consiste de um numero de 20 palavras que descrevem diferentes sentimentos e emocoes. Leia cada item e depois indique o numero, ao lado de cada palavra, que melhor representa com que extencao voce se sentiu dessa maneira ao longo da ultima semana	This scale is consisted of 20 words that describe different feeling and emotions. Read each item carefully and after indicate a number of the scale below next to each word that represents the extent of the way you felt during this last week.	This scale is consisted of 20 words that describe different feeling and emotions. Read each item carefully and after indicate a number of the scale below next to each word that represents the extent of the way you felt during this last week	
Interessado (a)	Interested	Interested	Interested
Angustiado (a)	Distressed	Distressed	Distressed
Animado (a)	Lively	Lively	Lively
Chateado (a)	Upset	Upset	Upset
Forte	Strong	Strong	Strong
Culpado (a)	Guilty	Guilty	Guilty
Assustado (a)	Scared	Scared	Scared
Hostil	Hostile	Hostile	Hostile
Entusiasmado (a)	Enthusiastic	Enthusiastic	Enthusiastic
Orgulhoso (a)	Proud	Proud	Proud
Irritavel	Irritable	Irritable	Irritable
Alerto (a)	Alert	Alert	Alert
Envergonhado (a)	Ashamed	Ashamed	Ashamed
Inspirado (a)	Inspired	Inspired	Inspired
Nervoso (a)	Nervous	Nervous	Nervous
Determinado (a)	Determined	Determined	Determined
Atento	Careful	Careful	Careful
Agitado	Agitated	Agitated	Agitated
Ativo (a)	Active	Active	Active
Amedrontado (a)	Frightened	Frightened	Frightened
Muito pouco ou nada	Very little or nothing	Very little or nothing	
Um pouco	A little	A little	

	Moderadamente	Moderately	Moderately	
	As vezes	Sometimes	Sometimes	
	Muitas vezes	Many times	Many times	
	ESCALA SOBRE ACULTURACAO, HABITOS E INTERESSES MULTICULTURAIS	<b>ACCULTURATION, HABITS AND INTERESTS MULTICULTURAL SCALE TO BRAZILIAN-PORTUGUESE</b>		
	Eu me sinto mais confortável estando com pessoas do...	I feel more comfortable being with people from...	I feel more comfortable being with people from...	I feel more comfortable being with people from...
	Meus melhores amigos são do...	My best friends are from...	My best friends are from...	My best friends are from...
	As pessoas com quem eu me dou melhor são do...	I get along better with people from...	I get along better with people from...	I get along better with people from...
	Minhas músicas prediletas são do...	My favourite songs are from...	My favourite songs are from...	My favourite songs are from...
	Meus programas de TV prediletos são do...	My favourites TV shows are from...	My favourite TV shows are from...	My favourite TV shows are from...
	As datas de feriado que eu celebro são do...	The holidays that I celebrate are...	The holidays that I celebrate are...	The holidays that I celebrate are...
	A comida que eu geralmente como eu casa é do...	The food that I usually eat at home is from...	The food that I usually eat at home is from...	The food that I usually eat at home is from...
	A maneira como eu faço as coisas e a maneira como eu penso são do...	The way that I do things and the way that I think are from...	The way that I do things and that I think are from...	The way that I do things and that I think are from...
	<b>ESCALA MULTIDIMENSIONAL SOBRE ESTRESSE ACULTURATIVO</b>	<b>MULTIDIMENSIONAL SCALE OF ACULTURATIVE STRESS</b>	<b>Back-trans 2</b>	<b>Synthesized back- translation</b>
	Britânicos tratam-me como estrangeiro	British deal with me as a foreigner	British people treat me as a foreigner.	British people treat me like foreigner.



Eu sou tratado(a) de forma diferente por causa da minha etnia, raça ou cor de pele.	I am treated differently because of ethnicity, race or color of skin	I'm treated differently because of my ethnicity, race or skin color.	I'm treated differently because of my ethnicity, race or skin colour.
Eu sou constantemente lembrado(a) do meu status como membro(a) de um grupo étnico minoritário.	I am constantly remembered of my status as a member of a minority ethnic group	I'm constantly remembered of my status as a member of a minority ethnic group.	I'm constantly remembered of my status as a member of a minority ethnic group.
Eu acho que várias oportunidades são negadas porque eu sou brasileiro(a)	I believe many opportunities are denied because I am Brazilian	I believe many opportunities are denied to me because I'm Brazilian.	I believe many opportunities are denied to me because I'm Brazilian.
Eu sinto que a sociedade britânica me discrimina porque sou brasileiro(a).	I feel that the British society discriminates me because I am Brazilian	I feel that the British community discriminates me because I'm Brazilian.	I feel that the British society discriminates me because I am Brazilian
Eu sinto que os britânicos não me tratam com respeito.	I feel that the British don't treat me with respect	I feel that British people don't treat me respectfully.	I feel that the British people don't treat me with respect
Pessoas de outros grupos étnicos tentam impedir de eu progredir	People from other ethnic groups try to prevent (hold) my progress	People from other ethnic groups try to hold my progress.	People from other ethnic groups try to prevent (hold) my progress
Eu me preocupo que meus filhos/ a próxima geração tenham "mente muito aberta".	I worry that my children/ the next generation will have a "widely opened- mind"	I worry that my children/next generation will be too open-minded.	I worry that my children/next generation will be too open-minded.
Eu sinto como se estivesse dividido(a) entre Brasil e Reino Unido.	I feel like I am divided between Brazil and United Kingdom	I feel like I'm divided between Brazil and United Kingdom.	I feel like I'm divided between Brazil and United Kingdom.
Eu me preocupo que um dia meus filhos não irão adotar os costumes brasileiros.	I'm worried that one day my children wouldn't adopt Brazilian costumes	I worry that one day my children won't adopt Brazilian manners.	I'm worried that one day my children wouldn't adopt Brazilian costumes

	Eu sinto que não sou nem brasileiro(a), nem britânico(a)	I feel that I am not Brazilian neither British	I feel that I'm not Brazilian neither British.	I feel that I'm not Brazilian neither British.
	Eu estou perdendo a minha identidade brasileira.	I am losing my Brazilian identity	I'm losing my Brazilian identity.	I'm losing my Brazilian identity.
	Eu fico triste quando não vejo minhas raízes culturais neste país.	I feel sad when I don't see my cultural roots in this country	I feel sad when I don't see my cultural roots in this country.	I feel sad when I don't see my cultural roots in this country.
	Meu trabalho é incerto.	My job is uncertain	My job is uncertain.	My job is uncertain.
	Eu tenho poucas oportunidades para aumentar meu salário.	I have little opportunities to enhance my salary	I have few opportunities to increase my salary.	I have few opportunities to increase my salary.
	Meu trabalho é inferior à minha experiência e qualificação	My job is inferior to my experience and qualification	My job is inferior to my experience and qualification.	My job is inferior to my experience and qualification.
	Eu estou desapontado que meu padrão de vida não é o que eu esperava antes de vir para a Grã Bretanha.	I am disappointed that my pattern of life is not what I expected before coming to the United Kingdom	I'm disappointed that my life standard isn't what I expected before coming to the United Kingdom.	I'm disappointed that my life standard isn't what I expected before coming to the United Kingdom.
	Minha experiência de trabalho e nível de escolaridade não são reconhecidos no meu emprego.	My work experience and educational level are not recognized in my job	My work experience and educational level are not recognized in my job.	My work experience and educational level are not recognized in my job.
	Eu sinto saudades do meu país e do meu povo	I miss my country and my people	I long for my country and my people.	I miss my country and my people
	Eu vivo longe da minha família, conhecidos e amigos.	I live far away from my family, acquaintances and friends	I live far away from my family, acquaintances and friends.	I live far away from my family, relators and friends.
	Eu sinto saudades da minha família, conhecidos e amigos.	I miss my family, acquaintances and friends	I miss my family, acquaintances and friends.	I miss my family, relators and friends.

	Eu acho que minhas responsabilidades familiares aumentaram depois que eu vim para o Reino Unido.	I believe my family responsibilities raised after I came to the United Kingdom	I feel that my family responsibilities increased after I came to the United Kingdom.	I feel that my family responsibilities increased after I came to the United Kingdom.
	Em algumas situações eu tenho dificuldades em entender inglês.	Some situations I have difficulties in understanding English	In some situations I have difficulties in understanding English.	In some situations I have difficulties in understanding English.
	Devido as diferenças entre línguas, eu sinto dificuldade em expressar minhas ideias.	Due to the differences between languages, I feel difficulty in expressing my ideas	Due to language differences, I feel difficulty in expressing my ideas.	Due to language differences, I feel difficulty in expressing my ideas.
	1 - Discordo	Disagree		
	2 - Discordo ate certo ponto	Disagree in some way		
	3 - Concordo ate certo ponto	Agree in some way		
	4 - Concordo	Agree		
	<b>ESCALA DE RISCO PARA USO DE SUBSTANCIAS</b>	<b>SUBSTANCE USE RISK PROFILE SCALE</b>		
	Por favor indique se voce concorda ou discorda com as seguintes afirmacoes, usando uma escala de 4 pontos	Please indicate whether you agree or disagree with the following statements, using a 4 points scale.	Please indicate whether you agree or disagree with the following statements, using a four points scale	Please indicate whether you agree or disagree with the following statements, using a 4 points scale.
	Eu sou uma pessoa satisfeita	I am content	I am content	I am content
	Muitas vezes eu falo sem pensar	Oftentimes I speak without thinking	Many times I speak without thinking	Many often I speak without thinking
	Eu gostaria de pular de paraquedas	I would like to go parachuting	I would like to go parachuting	I would like to jump from parachuting

## Appendix 8

Eu sou feliz	I'm happy	I am happy	I am happy
Eu gosto de novas e emocionantes aventuras mesmo que elas sejam incomuns	I enjoy new and exciting adventures even that they are unusual	I like new and exciting adventures even that they are unusual	I like new and exciting adventures even when they are unusual
Eu tenho fe que meu futuro sera promissor	I have faith that my future will be promising	I have faith that my future will be promising	I have faith that my future will be promising
Tenho medo de ficar tonto ou mesmo com o fato de desmaiar	I'm afraid of feeling dizzy or even pass out	I am afraid of feeling dizzy or even with the fact of fainting	I am afraid of feeling dizzy or even with the fact of fainting
Eu gosto de participar de atividades que me dao um pouco de medo	I enjoy participating in activities that scares me a little bit.	I enjoy participating in activities that scares me a little bit	I enjoy taking part in activities that scares me a little bit
Fico assustado quando meu coracao bate diferente	I get frightened when my heart beats change	I get scared when my heart beats differently	I get frightened when my heart beats change
Eu geralmente ajo sem pensar	I generally act without thinking	I generally act without thinking	I generally act without thinking
Eu gostaria de aprender a dirigir uma motorbike	I would like to learn how to ride a motorbike	I would like to learn how to ride a motorbike	I would like to learn how to ride a motorbike
Eu sinto orgulho das minhas conquistas	I'm proud of my achievements	I am proud of my achievements	I am proud of my achievements
Eu fico assustado(a)quando fico muito nervoso(a)	I get frightened when I get too much nervous	I get frightened when I get too nervous	I get frightened when I get very nervous
Em geral, eu sou uma pessoa impulsiva	In general I'm an impulsive person	In general, I am an impulsive person	Generally I am an impulsive person
Eu tenho interesse em experienciar coisas novas pelo prazer da experiencia em si, ate mesmo se for uma atividade ilegal	I have interest in experiencing new things for the pleasure of the thing itself, even if it is an illegal activity.	I am interested in experiencing new things for the pleasure itself, even if it is an illegal activity	I am interested in experiencing new things for the pleasure itself, even if it is an illegal activity

## Appendix 8

	Eu sinto que sou um fracasso	I feel that I'm a failure.	I feel that I am a failure	I feel that I am a failure
	Eu fico assustado(a) quando experiencio sensacoes corporais diferentes	I get frightened when I experience different body sensations.	I get scared when I experience different body sensations	I get scared when I experience different body sensations
	Eu gostaria de fazer uma caminhada de longa distancia em um lugar selvagem e inabitado	I would like to have a long distance walk in a wild and inhabited place.	I would like to have a long distance walk in a wild and inhabited place	I would like to have a long distance walk in a wild and inhabited place
	Eu sou agradável	I'm pleasant.	I am pleasant	I am pleasant
	Fico assustado(a) quando nao consigo focar em uma atividade	I get frightened when I can't focus on an activity	I get frightened when I can't focus on an activity	I get frightened when I can't focus on an activity
	Eu sinto que tenho que ser manipulativo(a) para conseguir o que quero	I feel that I have to be manipulative to get what I want	I feel that I need to be manipulative to get what I want	I feel that I need to be manipulative to get what I want
	Sou bastante entusiasmado(a) com o meu futuro	I'm very enthusiastic about my future.	I am very enthusiastic about my future	am very enthusiastic about my future
	1 – Discordo Totalmente		Strong disagree	
	2 – Discordo		Disagree	
	3 – Concordo		Agree	
	4 – Concordo Totalmente		Strong Agree	

## APPENDIX 9

### List of skill level groups and occupation categories of SOC2010

Skill Level	Occupation Categories	I.e. job activities
1	Manager and senior officials	Senior officials in national government, directors and chief executives of major organisations, senior officials in local government
	Professional occupations	Science professionals (i.e. chemists, physicists), engineers, health professionals (i.e. medicals and ontological practitioners, psychologists), teaching and researching professionals
2	Associate professional and technical occupations	science and engineers technicians, IT operators and supporters, health associate professionals (i.e. Midwives, paramedics, medical radiographers), social welfare associate professionals, actors, musicians
	Administrative and secretarial occupations	Administrative occupations including government and related organisations (i.e. civil services, officers of non-governmental organisations), Telephonists, Credit controllers, Library assistants/clerks, , Market research interviewers, General office assistants/clerks, personal assistants
	Skilled trades occupations	Farmers, gardeners, agricultural and fishing trades, skilled metal and electrical trades (i.e. smiths, , motor mechanics, electricians), skilled construction and building trades, butchers, bakers, chefs.

<b>Skill level</b>	<b>Occupation Categories</b>	<b>I.e. job activities</b>
3	Personal service occupations	Nursing auxiliaries, dental nurses, home cares childminders, educational assistants sport and leisure assistants, travel agents, hairdressers, beauticians, housekeepers.
	Sales and customer service occupations	Sales and retail assistants, call centre operators, debt, rent and other cash collectors
	Process, plant and machine operative	Food, drink and tobacco, wood, paper process operatives, routine inspectors and testers, scaffolds, and construction operatives, rail construction and maintenance operatives.
	Military occupations*	
4	Elementary occupations:	Farm workers, cleaners, kitchen assistant, waiter/waitress, labourers in building and woodworking trades, elementary office occupations, delivers, doorman, porters, shelf fillers.

## APPENDIX 10

### Codebook Thematic Analysis (Example)

CODEBOOK 1: BRAZILIAN IMMIGRANTS IN THE UK (SAMPLE)			
CODE LABEL	DESCRIPTION	EXAMPLES	
		Original	Translated
Share accommodation/lived with who prior to leaving Brazil	With who the participant was living prior to emigrating Brazil	<i>Morava com meus pais, meu pai, minha mae e minha Irma</i>	<i>I was living with my parents, dad, mum, and sister</i>
Friends back in Brazil	Description of the group of friends in Brazil. The majority of participants described it as large and quite diverse	<i>Meu grupo de amigos assim, nossa, eu sou muito popular, passei por muitas escolas e conheci muita gente. Eu tenho amigos, nossa, completamente diferente dos daqui, gente que é muito culta, gente alienada, gente de tudo que é jeito.</i>	<i>My group of friends, well, gosh, I'm very popular, I passed many schools and met many people. I have friends, gosh, completely different from here, people who are very educated, alienated people, people of all kinds.</i>
First times going out/party	Brief information on how was going out for the first times back in Brazil	<i>Então tipo assim, quando os meninos iam lá pra casa era só festa, só farra, mas a gente ficava lá, quando queria sair tinha que pedir pro meu pai falar com quem ia</i>	<i>So like, when the boys used to go to our house it's was a great party, very fun, and we used to stay. If we wanted to go out in another place we had to ask my dad permission</i>
Urbanization	<i>Experience involving moving from a small to a larger city in Brazil</i>	<i>Eu venho de uma cidade do interior e lá tem muito, eu não gosto dessa parte da minha cidade, por que há um julgamento muito grande, da forma como você sai, onde você vai, com que grupo que você anda, e aqui em Londres não. Mas isso eu já percebi de quando eu mudei pra São Carlos pra fazer faculddad, então lá eu tenho mais liberdade do que na minha cidade natal.</i>	<i>I come from a country town and I do not like that part of the small town, the large and constant judgments about the way you go out, where you go, with which group you go. Here in London this does not happen. But I already noticed a difference when I moved to Sao Carlos to study in the university. There I have much more freedom than in my hometown</i>



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Influences to come to the UK	The role that networking (family and friends) influenced to coming to the UK, as well as a few later problems with it. Other influential factors like financial opportunities and interest in the European's life style and culture attached to it	<p><i>Eu sempre tive uma rebeldia contra a America. O velho mundo me influenciou mais digamos. Tinha mais vontade de conhecer a Europa do que ir pra America ou outro pais</i></p> <p><i>Minha história começou através do meu irmão e de um amigo meu. Eu vim pra cá em abril, dia cinco de abril de dois mil e quatro. Daí eu vim atrás de meu irmão, comecei a trabalhar aqui, como todo mundo.</i></p>	<p><i>I always had a rebellion against America. The old world influenced me more . Had more desire to see Europe than go to America or other country</i></p> <p><i>My story began through my brother and a friend of mine. I came here in April, the fifth of April, 2004. I came to stay with my brother and I started working here, like everyone else.</i></p>
Lack of information about Britain prior to migrating	The lack of knowledge, understand, and information about Britain and the culture prior to migrating	<p><i>Eu nem sabia que esse lugar existia. Ela disse que me trazia pra cá, eu não sabia como era, não passava na minha cabeça como era, nada</i></p> <p><i>A gente sempre tem uma ideia, totalmente vaga, totalmente diferente, mas tu sempre tem aquela ideia meio no ar.</i></p>	<p><i>I did not even know this place existed. She (untie) said she would bring me to here, I did not know how was here, did not pass through my mind how was, nothing</i></p> <p><i>We always have an idea, totally vague, totally different, but you always have that idea through the air.</i></p>
Reasons for migrating to the UK	A few reasons for migrating to the UK were cited including the desire to see the world, seeking for cultural enrichment and new experiences, learning the English language, economic driven, escaping from problems and way of enjoying life	<p><i>Nossa, viajar pra mim é uma das coisas que mais me atrai aqui. Parece que você tem as portas abertas pra qualquer lugar da Europa. Se eu fosse morar nos Estados Unidos eu não ia ter isso aí, teria os Estados Unidos e o Canadá no máximo.</i></p> <p><i>Naquela época o lado financeiro em Londres era mais alto aqui, naquela época aqui era seis por um. Estados Unidos naquela época esta um e meio., então não valeria a pena ir pra lá. E mesmo assim, lá eu ia ser uma pessoa, aqui eu tinha meu irmão, e meus amigos aqui já, lá eu não tinha ninguém</i></p>	<p><i>Travel for me is one of the things that attract me most about here. Looks like you have the doors open to anywhere in Europe. If I was living in the US I would not have it there. It would be traveling in the US and Canada at most.</i></p> <p><i>The financial side in London was higher then. It was six reais to one pound. United States at the time was only one and half. It was not worth going there. And yet, there I was going to be a person alone and here I had my brother, and my friends. There I had no one</i></p>

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Brazilian community in the UK	Comments and description of the community including reasons for lack of social mobility and why and why not being connected with other Brazilian people in the UK	<p><i>Tem brasileiro aqui que so vai em restaurant brasileiro, que so vai em balada brasielira. Tem gente aqui que vive ha 7, 9 anos e nao fala nada de ingles. Nao tem um amigo que nao seja, tem a cabeca meio fechada</i></p> <p><i>Que nem aqui, eu não sei se a pessoa é meu amigo ou porque eu posso arrumar emprego pra eles</i></p>	<p><i>There are Brazilians here that just go on Brazilian restaurant, just go out in Brazilian parties. There are people living here for seven, night years 9 and can not say anything in English. I do not have one Brazilian friend here that does not has a close mind.</i></p> <p><i>I do not know if the person (Brazilians in the UK) is my friend or is close to me because I can get a job for him/her.</i></p>
Changes in the self after moving to the UK	A few comments about some changes that the participant feel that might be associated with the fact of migrating/living in the UK	<p><i>tomar decisões sozinha, porque antigamente dependia dos meus pais. Aqui eu tive que colocar na minha cabeça que eu tava sozinha, eu não tinha ninguém pra decidir nada pra mim. nada, Estou sozinha aqui.</i></p> <p><i>Intenção de fazer amigos de outra cultura, apesar de eu não ter feito muitos mas a intenção a princípio era essa. Então acho que tô mais aberta aqui.</i></p>	<p><i>Take decisions alone, because prior to moving to here I a depended a lot of my parents. Here I had to put in my head that I was alone, I had no one to decide anything for me. Nothing, I am alone here.</i></p> <p><i>Intention to make friends from another culture, although I have not done many but I had this intention at first. So I guess that I'm more open here</i></p>
Connection with Brazil	How and to which extend the participant maintain connected with people/culture/news in Brazil	<i>Tu te sente presente na vida deles? Sim, como eles na minha, entendeu? Nunca faço nada sem comunicar eles, sem conversar mesmo eles estando lá e eu aqui</i>	<i>Do you feel present in their (parents) lives? Yes, as they are in mine, do you understand? I never do anything without communicating them even with them being there and me being here.</i>
Differences between the UK and Brazil	Differences between countries in culture, structure of the society, gay community, life style, and opportunities	<p><i>Eu já me adaptei depois de tantos anos, mas as vezes a gente sente falta, né. A nossa cultura é diferente. A gente é mais caloroso, a gente abraça, beija, é bem diferente do que se aprende no Brasil.</i></p> <p><i>Voce se sente ate rejeitado sendo diferente no Brasil. Voce acaba sendo rejeitado</i></p>	<p><i>After so many years here, I have already adapted to here, but sometimes we miss our culture, right? Our culture is different. We are warmer, we hug, we kiss each other. It is quite different here from what we learned in Brazil.</i></p> <p><i>You feel rejected by being different in Brazil. You end up being rejected</i></p>

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Cultural identity	How the participant describe its cultural identity in terms of being English, Brazilian, or something else	<p><i>Eu não tenho ilusão por que moro em Londres eu sou inglesa, ou eu sou, eu, pertença a comunidade européia ou coisa parecida não,</i></p> <p><i>Eh uma questao complicada, ne. Nao sei se eu me considero um imigrante ou mas eu nao sei se eu me consider um Londoner tambem</i></p>	<p><i>I have no illusion that because I live in London I will be English, or that I belong to the European community or something like that</i></p> <p><i>This is complicated. I do not know if I consider myself an immigrant or if I consider myself as a Londoner</i></p>
Cultural Threat	The stress of not knowing where the participant belongs culturally and of being losing the Brazilian identity	<i>Mas tu nem sabe mais aonde eh a tua casa, porque quando tu aqui vive sonhando ir pro Brasil nossa. Chega la, passa 10 dias e aquele momento de ferias e tu comeca a sentir aquele, entao nem sei mais a identidade, nao sei nem te dizer aonde eu me sinto mais, sempre perdido em um lugar.Eh uma sensacao muito estranha.</i>	<i>But you do not know where is your house anymore. When you live here you keep dreaming in going to Brazil. Gosh! When you get there, after passing 10 days and that feeling of holiday, you begin to feel that you don't want to be there. So I do not know anymore my identity. I do even do not know which place I do identify myself mostly. We I am there I feel lost in that place. It is a very strange sensation.</i>
Family	Obligations and feelings related to family	<i>Eu gostaria de estar presente, você acaba se dando conta que não tá vivenciando com eles no dia a dia e isso não volta atrás. Eu sou filha única e minha mãe tá sozinha lá, isso me tem dividido muito.</i>	<i>I would like to be present. You end up realizing that you are not experiencing with them the daily basis and it is not possible to get these experiences back anytime later. I'm the only child and my mother is alone there. This make me very divided</i>
Adaptation to the life in the UK	Information about whether the participant feels adapted or not to the life in Britain	<i>Pra mim foi muito, foi uma coisa muito interna. De repente, quando eu tava me sentindo mais a vontade comecei a ver que eram pessoas que apenas falavam outra língua, como eu.</i>	<i>For me it was a very internal thing. Suddenly, when I was feeling more comfortable I began to see that they were people who just spoke another language, like me.</i>
Feelings	Which are the participants feelings regarding living in the UK, about the culture, and the pressure of gaining skills	<p><i>Estou sozinha aqui</i></p> <p><i>Então essa pressão que a gente tá recebendo, tipo, tô gastando meu dinheiro em mil outras coisas e eu não sinto que vou levar alguma coisa</i></p>	<p><i>I am alone here</i></p> <p><i>We are feeling pressured to be here, like, I'm spending my money on a thousand other things and I do not feel like I will be taking something good back home (Brazil)</i></p>

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Alcohol in a night out	Which type of alcohol the participant drinks when going out and some patterns of drinking associated with it	<i>Bebo vinho, vinho tinto, vinho branco</i>	<i>I drink wine, red wine, white wine</i>
Differences between UK and Brazil in substance misuse	The differences in patterns of substance misuse between Brazil and the UK including the difference in availability and cultural patterns of drink intake	<i>É, porque é muito fácil aqui. É mais fácil aqui do que no Brasil pra se conseguir. É a mesma coisa, é proibido da mesma maneira, mas é bem mais fácil, é bem mais fácil. Você sai na rua agora, atravessar a rua, você consegue</i>	<i>It is because it is very easy here. It is easier here than in Brazil to get any drug. It is prohibited in the same way in both countries, but it's easier here, it's much easier. You go out on the streets now, just cross the street, and you can get something</i>
Finances strains due to substance use	The financial consequences of misusing substances	<i>Eu moro de aluguel, mas em oito anos ou mais, eu nunca fui a sarjeta, você nunca me viu na rua as 5 da manhã, estralado, ninguém nunca me viu, mas eu gastei dinheiro o suficiente, que faz uma grande diferença na minha vida agora, eu só gastei</i>	<i>I rent a place to live. In eight years or so, I've never been the gutter, you never saw me in the street at 5 am, crazy, nobody ever saw me in such state, but I spent enough money, that makes a big difference in my life today, I just spent</i>
First experiences using substances	Onset and comments about the first times using substances including sensations and seeing	<i>Eu tinha julgamento, mas como eu confiava nele e eu sabia que ele não ia me dar nada que não era seguro, por saber que ele estudava muito essas coisas de usar, conhecia a parte histórica e tudo mais, eu me senti um pouco mais confortável, mas estava com medo. Acho que não tem como você não estar repreensivo pra você usar</i>	<i>I used to hold a judgment about drugs, but as I trusted him and I knew he was not going to give me anything that was not safe, to know that he studied hard these things to use, knew the historical part and everything, I felt a little more comfortable but was afraid. I think there's no way you will not be reprehensible for using at the first times</i>
Friends that are substance misuser	Information about participants' friends that misuse substances: who are they and which substances they misuse	<i>Todos tem envolvimento com drogas de várias espécies mas é uma coisa assim super, não sei até onde é natural, mas é uma coisa que é super natural pra eles, maconha, êxtase ou, ah, cocaína,</i>	<i>They all have involvements with different types of drugs, but it is something very natural for them, however, I don't know how natural it is. Cannabis, ecstasy, and cocaine</i>

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From one substance to another	The participant views/experience about the use of one substance leads to the use of other substance	<i>Mas eu nunca tive curiosidade de usar. Mas eu acho que algum dia em minha vida eu vou usar pra ver como é que é, mas eu não tenho essa curiosidade agora</i>	<i>But I never had curiosity to use (injecting drugs). But I think sometime in my life I will use to see how it is, but I do'nt have this curiosity now</i>
History of substance misuse in the family	The problematic use of substance by other family members included parents	Meu pai, sempre tive problemas com meu pai, meu pai foi alcoolatra. Agora ele nao beb mais, mas quando eu tava no Brasil ele era alcoolatra, ficou desempregado por 10 anos, era so minha mae trabalhando .	<i>My fathe. I always had problems with my father. My father was an alcoholic. Now he does not drink anymore, but when I lived in Brazil he was alcoholic, has was unemployed for 10 years so it was my mother the one who used to work</i>
Feeling of controlling the substance use	Information about the feeling of knowing when could start use drugs	Eu já tinha passado no vestibular, fazia faculdade, me considerava uma pessoa bem responsável, eu sabia que saberia como administrar aquilo ali. E foi o que eu fiz, eu administrei, eu administro bem, sei a hora de usar. Sei que tem coisas que se eu fumar eu não posso fazer, assim, eu não vou fumar se eu dirigir	<i>I had passed the entrance exam to get in uni. I considered myself a very responsible person, I knew I would know how to manage it there. And that's what I did, I managed, I manage well, I know the time to use. I know you have things that I smoke I can not do, so I will not smoke if I drive</i>
Influences for using substance.	The role of peer pressure, partners influence and other influences that led the participant to use substances	Influência existe a partir do momento em que você olha a sua volta,	<i>Influences exist from the time that you start to look around</i>
Church as an influential factor to stop using	Geeting involve in he church as an influential factors to stop using/misusing substances in	Eram da igreja, da igreja. Aí aconteceu, comecei a ir nas reuniões. Eu liguei pra meu tio, que ele é da mesma igreja que nossos pais no Brasil, tio, vou te dar um conselho, não deixa de ir nas reuniões, vai indo e vai deixando as coisas acontecer. Se tu gostar, deixa acontece	<i>They were from the church. Then it happened. I began to go in the meetings. I called my uncle, he is the same church that our fathers in Brazil. My uncle said: I will give you some advice, do not stop going to the meetings, keeping going and let things happening naturally. If you like, let it happens</i>
Parents view about substances use	Parents opnions about substances in general	Meu foi sempre foi muito liberal com esse negócio assim, se for beber beba aqui comigo, se vai fumá, vai pagá, vai pagá pelo seu cigarro	<i>My dad always been very liberal about drinking so 'if you would like to do drink do drink with me', 'if you want to smoke, you will have to pay for the cigarettes'</i>

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Protective factors	Protective factors for not using (misusing) substances or for not ending up using a 'stronger type of substance. These factors include: church, parents, finances, worry of losing control, spiritual, sport activities, health outcomes, and media	Droga, droga é fuga até que se torna vício. Pra mim tudo é fuga, sabe. Eu não preciso disso. Eu falo assim, fechar o olho agora, tá bom, vou ser louco por dez minutos, eu saio correndo nesse mercado gritando e eu te faço passar vergonha, eu não preciso assim de coisa, entendeu? Eu não gosto de nada que me tire muito fora da minha razão, sabe.	<i>Drugs. Drugs in my opinion are forms of escaping until it becomes habit. For me everything is escape and I do not need it. I like to say: if I close the eye now, I can be mad for ten minutes, I can go out running in this market screaming and I can make you feel shame to be with me. If I want to do, I will and I can control it. I do not like anything that might make me feel out of controlling myself.,</i>
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CODE BOOK 2: BRAZILIANS RESIDING IN BRAZIL (SAMPLE)			
CODE LABEL	DESCRIPTION	EXAMPLES	
		ORIGINAL	TRANSLATED
Description of the self	Information on how the participant describes itself in terms of characteristics and personalities. A number of traits have been described, i.e., introversion, impulsive, anxious, meticulous, communicative, competitive, distracted, easygoing, high, passive, determined,	<i>É, também, várias coisas assim. Então, são várias coisas que, tipo assim, eu não me considero uma pessoa depressiva mas eu tenho fases depressivas assim</i>  <i>Eu sou altamente impulsivo</i>	<i>There are many things and I don't consider myself depressive but I do have depressive phases</i>  <i>I am a very impulsive person</i>
Copying mechanisms	Ways of dealing with problems/difficulties including procrastinating, trying to escape, and engaging in many things	<i>Como eu falo com a minha esposa, eu aceito pra não entrar em atrito, não só em casa, mas na rua também, eu não sou muito de ficar discutindo, daí eu deixo passar algumas coisas assim, e aquilo fica acumulando ne... Daí bah. Eu fico sofrendo sozinho</i>	<i>As I say to my wife: 'I accept things to not get problems, not only at home but also in the outside. I'm not a person that will get involved much in an argument then I let things go, but then those things start to get accumulated inside of my head some things like that, and that is accumulating... And, Gosh! I keep suffering alone</i>
Parental style	Information regarding to parental style experience growing up	<i>É, o meu pai é bem mais rigoroso. O pai é rigoroso, forte, cobrava bastante assim. Forte, eu sempre tive medo dele assim quando pequeno né, nem tudo respeito mas medo assim, "ah Deus, meu pai" sabe.</i>	<i>Yeah, my father is much more rigorous. My father is very strict, strong, and always requested things from me. He is strong and I was always afraid of him</i>

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			<i>when I was little. I probably felt more fear than respect for him. It was always like "Oh God, what if my father discover"</i>
Social life	Information about the group of friends (large or small), commitment with friends, and going out	<i>Eu tenho um grupo de amigos que tem umas dez pessoas, mas aí a gente sempre se reúne na casa de alguém que tenha uma casa maior e daí sempre vai os amigos dos amigos dos amigos.</i>	<i>I have a group of friends of about ten people. We always meet at the home of someone who has a bigger house and there will always be as well friends of my friends.</i>
Addictive Behaviours	Patterns of addiction and whether the participant feels that it is addicted to a substance	Era meu objetivo principal. Meu objetivo principal era a bebida, o resto era o resto	<i>It was my main goal. My main goal was to drink, the rest was the rest</i>
Controlling substance use	Feeling of controlling the substance use in terms of if I want to stop, I will stop	As vezes eu fumo até antes de trabalhar mas é que as vezes afeta e as vezes não. As vezes é até melhor pra eu criar chapado assim, eu viajo muito mais, mas sem, mas sabendo que não posso sair da casinha, eu acho que me sinto bem, sei lá, preparado, de cabeça feita assim, que eu já, sei lá, já fiz um monte de coisas e eu sei o quê que eu quero, sou meio que focado assim em não sair muito da linha.	<i>Sometimes I smoke (cannabis) before working, but sometimes smoking affects my performance at work and sometimes not. Sometimes it's even better for me to be stoned to work, I get much more creative, but I am aware that I can not crazy in creating stugg. I think I feel good, I fell prepared, a grown up person, I already done a lot of things in my life and I know what I want, I'm have some kind of focus on not geeting much crazy/stoned</i>
Family views about substance use	The way of how the family sees the use of substances, as well as whether they know or not the participant substance use behaviours	Quando ela descobriu que eu fumava, ela achava que eu tava no fundo do posso, que gastava todo meu dinheiro, que não tinha futuro e coisa e tal. É essa visão que ela tem, então tá, como eu vou argumentar com isso, não tenho como argumentar. Não adianta, ela sempre vai pensar assim	<i>When she found out that I was smoking (cannabis), she thought that I was completely lost, that I was spending all my money. That I had no future ahead. This is the type of views sha has then howI will argue against it? I can not argue. I can't, she will always think like that.</i>

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First experiences using substances	First experiences including onset of substance use and thoughts about using	<i>E dai como a gente era muito novinha e nao tinha muita amiga que usava droga, dai a gente nao tinha acesso as drogas. Entao o que a gente fazia, comprava benzina na farmacia e se reunia para cheirar benzina. Ai depois da benzina foi a maconha. Eu experiementei maconha. Depois da primeira vez ja deu, ja chapei assim, porque todo mundo fala que da primeira vez nao da</i>	<i>Because we were very young and were not many of our friends who were using drug, we did not have much access to drugs So what we did was to buy benzene in pharmacy and get together to smell it. Then, after benzene we started smoking cannabis. I tried cannabis. At first time that I smoked I felt. I got stonned, however, everyone says that at the first time we don't get stonned. I did</i>
Friends substance use	The role of peer pressure in the substance use. The distinguish about which kind of group of friends according type of substance. Reports of friends that got lost misusing substances	<i>O cigarro foi uma coisa sozinha sabe. Até descobri meus amigos no verão que tavam fumando e daí comecei a fumar com eles, daí eu me sentia legal</i>	<i>The cigarette I started smoked by myself until I found that my friends in the summer were smoking too. I then started smoking with them and so I started feel cool about it.</i>
From one drug to another	Info about whether the use of one type of substance leads the use of others. Paths involved from using one drug to other	<i>Antes de chegar na cocaína eu já usava ritalina com álcool.</i>	<i>Prior to geeting into cocaine I was already taking ritalina with alcohol.</i>
Access to the drugs	Info of how the participant has access to illegal substances	<i>Não, a vantagem é que era um risco controlado, assim. Hoje eu não passo mais esse risco. Hoje eu tenho, vamos dizer, eu pago mais caro, muito mais caro mas não vou, não entro mais em vila. Hoje não tenho mais vontade de fazer isso.</i>	<i>No, the advantage is that it was a controlled risk. Today I no longer I take that risk anymore. Today, let's say, I paid more, much more money but I will not, I do not go in the slung anymore. Today I don't have the desire to do it.</i>
Mixing substances	Info about mixing substances, when and how	<i>Eu não sei te dizer o porquê que, sabe o quê que é? O álcool sempre foi pra mim, o álcool e a cocaína pra mim é que nem o cafezinho e cigarro.</i>	<i>I do not know why. I don't know what is it? Alcohol has always been for me, alcohol and cocaine to me is like coffee and cigarettes.</i>
Substances in a night out	Type of substances common used and pre-party meetings	<i>Basicamente antes de ir pra noite a gente tomava, a medida era uma garrafa para duas pessoas, se iam quatro pessoas eram quatro garrafas, então, a gente bebia até acabar a garrafa. Quando acabava a gente ia pra festa. As vezes a gente saia pra noite as três da manhã.</i>	<i>Basically before going out at night, we used to drink, an average, of a for two people. If four people would come, we would have four bottles then. We used to drink until the bootle end. Once that</i>



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			<i>finished we then would go out. Sometimes we used to go out at night at three in the morning.</i>
Outcomes	Outcomes associated to cannabis and cocaine use, as well as expectations regarding the outcome that these substances offer. Further, comments about negative outcomes associated with using substances in general	<i>Porquê o cara se sente mais autoconfiante</i>	<i>Because we fell more selfconfident.</i>
Parents reaction to substance use	How parents reacted when discovered about the child substance use, i.e, blindness, panicking, controlling, liberal views	<i>Quando a mae ficou sabendo, quando eu tinha 14, a mae foi mais aberta assim. O pai nunca disse, agora ele fala "ah, eu sei que tu ta fumando maconha, mas na epoca que ele descobriu, ele nunca teve coragem de chegar e dizer eu sei que tu fuma.</i>	<i>When I was 14, my mum found out that I was smoking (cannabis). She was quite relax and open mind to it. My dad at that time never said anything, but now he says "ah, I know you smoke' But at the time he found out he hadn't the courage to come to me and say that he knew that I was smoking..</i>
Phases	Difference phases involved in the substance use, i.e., adolescence, changes in the seeting-set, decreasing the quantity of using, geeting into the adulthood, changing group of friends	<i>eu tava cheirando mais pra ficar em casa porque a noite foi uma coisa que me saturou assim, eu já não curtia mais</i>	<i>I started to sniffing cocaine to stay at home because I got enough of going out at night</i>
Protective factors	Factors that might have protect participants to use and/or misusing certain substances, i.e, negative outcomes, church, image, sport, and selective with regards to friends	<i>então, um dos fatores que eu não bebo é porque eu não gosto do jeito que eu me sinto. Com o meu corpo, não sei, eu não consigo não pensar direito, ou não ser tão controlada como eu costume ser, assim</i>	<i>So, one of the factors that is why I do not drink is because I do not like the way how I feel. I don't like the way I fell it in my body, I can not think properly under the influence of alcohol and I can not hold control of what I feel.</i>
Quantity	The average quantity of substance use in the day/night out	Uns 15 cigarros por dia	<i>Around 15 cigarrets in the day</i>

## Appendix 10

Reasons for using substances	Copying, relaxing, for a laugh, deal with laziness, self control, spiritual, to be different	E geralmente pra sair do estresse do trabalho, da escola, da faculdade assim, daí eu costumo fumar um baseado	<i>I usually smoke a beck to deal with the stress of my work, univerisy</i>
Reasons for not taking certain substances	Reasons for who use substances to not use some other type of substances	Eu sou muito preconceituoso assim com o pó, eu não gosto de pessoas que usam, não gosto.	<i>I am very prejudiced with cocaine. I don't like people that use it. I don't like.</i>

## APPENDIX 11

### Evaluative constructs applied in the Thematic Analysis' Method (Lincoln & Guba, 1985)

<b><i>Credibility.</i></b>	A set of activities was followed to strength the credibility of this study qualitative results. Among these activities are the triangulation technique (for methods, sources, and theory), prolonged engagement between the researcher and participants (achieved by interviewing a range of people and developing rapport with members of the community), checking interpretation against the raw data constantly, and thick description (providing enough details of the complexity of the data using a range of quotes).
<b><i>Transferability</i></b>	It has been addressed through the detailed description of the research stages from study conception, through design, to analysis and write-up. Adopting the thick description, as mentioned above, also contribute to this criterion as it offers a way of evaluating the extend to which the conclusions drawn are transferable to other settings, situations, and people.
<b><i>Dependability</i></b>	It was reached by the coherence of the coding process. In this way, the development of the codebook offered a connection between research question and the theoretical underpinnings of the TA.
<b><i>Conformability</i></b>	It is conferred by the extent to which findings are the result of the experiences and ideas of the participants rather than characteristics posited by researcher's preferences. This construct was addressed by providing enough details about the analytical plan and stages of the analysis as has been indicated in this report. The development of the codebook and thematic maps also supports the conformability of this analytical journey.

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